Friendship group motives for alcohol consumption: A midstream social marketing approach

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"An investment in knowledge pays the best interest."

Benjamin Franklin

Abstract

Risky drinking by Australians is a serious problem that is estimated to cost society $36 billion a year, which is almost four-and-a-half times the cost of illicit drugs (Collins & Lapsley, 2008; Laslett et al., 2010). Past health management approaches, such as education, have proved largely ineffective (Babor et al., 2010) and are likely to work only when the target market is motivated to change its behaviour and has the skills and opportunity to do so (Binney et al., 2006; Rothschild, 1999). Legislation and policy change are likely to change behaviour (Rothschild, 1999). However, the economic and political power of the alcohol industry and its lobby groups largely favour pro-business orientations, which conflicts directly with public health advocates (Babor, 2009; Room, Babor, & Rehm, 2005); such industry approaches include self-regulation, focusing attention on underage drinking and using education instead of higher taxes to reduce heavy drinking (Bond, Daube, & Chikritzhs, 2009); Stockwell & Crosbie, 2001). Therefore, since education on its own is largely ineffective and legislation is limited, an alternate approach to behaviour change is necessary, namely social marketing. Social marketing moves beyond informing and raising awareness and uses commercial marketing to motivate behavioural changes towards a positive social goal (Dann, 2010; French, Blair-Stevens, McVey, & Merritt 2010).

Within social marketing, there is allegedly an over-emphasis on individual behaviour-change (Wymer, 2010). Therefore, this thesis seeks to go beyond the individual and examine group motivations for alcohol consumption. Much research on teams and performance in groups comes from organisational behaviour literature, with social loafing (the tendency for individuals to expend less effort when working collectively than when working individually) dominating the field (Karau & Williams, 1993; Kerr & Hertel, 2011). However, one phenomenon exists where the opposite may occur, such that an individual may increase their performance when they are in a group. This process is known as the Köhler motivational gain effect (1926, 1927). Although this phenomenon has been researched in organisational behaviour and sports psychology contexts, it has yet to be applied to risky health behaviours in the field. Furthermore, the individual underlying motives for drinking are well-understood, but a study of group-level motivations is neglected. Group-level

motives are likely to override – or at least, interact with – individual level motives (Kerr & Hertel, 2011) and, as such, should be explored and examined. In social marketing this area of social influence is often referred to, as the "midstream approach" – in between the downstream and upstream, the downstream being the individual whose behaviour we might examine and the upstream being the environment which affects both the midstream and downstream (Hoek & Jones, 2011).

In light of the limited research on group-level motives towards alcohol consumption, this research sought to determine certain group-level motives for alcohol consumption and to determine which group-level motives most accurately predict alcohol consumption. The methodology employed was an exploratory mixed methods design composed of interviews and a survey to answer these questions. Qualitative interviews were used to determine certain group-level motives of alcohol consumption for people aged 18 to 30 years. Nineteen interviews were conducted, ranging in length from 17 to 55 minutes and averaging 31 minutes. Seven group-level motives were discovered: competition, copying, commitments, conformity, winding down, hedonism, and confidence. Three factors that moderated the relationship between motives and consumption were also uncovered: group gender composition, drinking occasion, and social connectedness.

A quantitative study was then conducted on 252 participants (response rate of 5%) aged from 18 to 30. The aim was to quantify and empirically examine the relationship between group level motives and alcohol consumption. Four motives (copying, conformity, winding down, and hedonism) were significantly related to alcohol consumption and three (competition, commitments, and confidence) were not related. The moderating effect of group-gender composition, drinking occasions, and social connectedness were also tested. Group-gender composition moderated the relationship between conformity and alcohol motives. Drinking occasion did not moderate any of the relationships between motives and consumption. Social connectedness did not moderate any of the relationships between alcohol motives and alcohol consumption.

In terms of contributions to theory, this thesis explicitly examines drinking from a midstream point of view, moving away from the largely dominant downstream and individualistic approaches. A major contribution that this research makes to theory is the external validation of Köhler motivational gains. Evidence for collective intentions was also found within the qualitative research in terms of participants having similar motives with the group or similar reasons for consuming alcohol at the same point in time, such as winding down after a stressful event. Evidence that verbal communication between group members pushed individuals to consume more alcohol was also found. This research finds a new factor involved in Köhler motivational gains which has an impact on the outcome variable that is measured, namely copying. By taking a midstream approach this research has lifted the lens of focus up a level to examine the impact of the friendship group on alcohol consumption. This research contributes to motives for alcohol consumption by expanding the motives to encompass the friendship group and studying the influence and force that friends have on the target individual. This research finds that friendship group level motives have a powerful effect on alcohol consumption and that future research needs to examine people from a group perspective. Furthermore, research should also go beyond the group to examine the environment and the interactive effects that the individual, group, and environment have.

We now know that, by looking at drinking from a group level, we can see different – or at least, unique – motives for drinking compared with the traditional individual level. These motives include the seven previously mentioned. In terms of contributions to practice, social marketing campaigns can be developed and based on the motives that groups have when they consume alcohol. A campaign targeting groups adapted to each motive would be more productive than a simple awareness or 'danger warning' campaign. Ultimately, this research has examined group-level drinking motives and the way in which these motives effect alcohol consumption and are moderated by group-level factors.

Publications arising from this thesis

Peer-reviewed conference papers

McAndrew, R., Russell-Bennett, R. & Rundle-Thiele, S. (2011, November). *Moving beyond the individual: Using group theories to conceptually examine risky drinking*. Paper presented at the Australian New Zealand Marketing and Advertising Conference, Perth, Australia.

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McAndrew, R. & Russell-Bennett, R. (2012, July). *Risky consumer behaviour: Are group processes overriding individual autonomy?* Paper presented at Association for Consumer Research, Queenstown, New Zealand.

McAndrew, R., Rundle-Thiele, S. & Russell-Bennett, R. (2013, December). *Speaking their language: Examining risky drinking from the customers' point of view*. Paper presented at the Australian New Zealand Marketing and Advertising Conference, Auckland, New Zealand.

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Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet the requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person except where due reference is made.

Signed: QUT Verified Signature

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Chapter 1 Introduction

1.0 Introduction

"I have very poor and unhappy brains for drinking: I could well wish courtesy would invent some other custom of entertainment."

(Cassio, in *Othello*, William Shakespeare, 1622)

Social marketing is the adaptation and adoption of commercial marketing to induce behavioural change in a targeted audience to achieve a social goal (Dann, 2010). Social marketing typically focuses on problems and risky behaviours that education and policy changes alone cannot address. Risky behaviours that occur within a social environment, such as risky drinking, serve as potential areas where such a focus of social marketing would be most appropriate and beneficial. Accordingly, the focus of this thesis is to examine the role of group motivations in risky consumption of alcohol. Social marketing campaigns may be limited by an over-emphasis on individual behaviour change, with researchers calling for more attention to midstream factors, such as social groups (Lefebvre, 2011; Wymer, 2011). Therefore, this research will investigate group-level motivations in alcohol consumption.

This section outlines the key components of the proposed research. Specifically, it discusses the research background, examining the issues surrounding alcohol consumption. The rationale for conducting the research is then explained; this helps to justify the research and its potential. The approaches taken are then outlined; gaps in the literature are examined along with subsequent research questions and methodology for answering these questions. Lastly, the expected contributions to social marketing theory, practice, policy, and methodology are discussed.

1.1 Risky Consumer Behaviour

There are some consumers who will engage in risky consumption behaviour as a result of peer pressure, lack of alternatives, habit, boredom or a need to satisfy their sensation seeking personalities. Sensation seeking is characterised by "the need for varied, novel and complex sensations and experiences and the willingness to take physical and social risks for the sake of such experiences" (Zuckerman, 1979, p. 10) and is associated with an array of problem behaviours (Zuckerman, 1994). Put simply, some customers desire risk. Consequently, within alcohol consumption, and especially heavy drinking, it could be possible to assume that those who drink a lot choose to do so because they value this immediate gratification more than the costs and issues related to problems that result from drinking (Goldberg, Halpern-Felsher, & Millstein, 2002). Furthermore, the effect of certain personality traits could have an impact on drinking rates (Stautz & Cooper, 2013), and on how much of an influence the friendship group can have on the individual (Faris & Ennett, 2012). This means that how receptive someone is to interpreting emotions, and how much someone is a transporter of influencing emotions, could have an impact on their level of alcohol consumption. In addition, the interaction between these receptive and transporter behaviours and their synergistic effect within a friendship group could further, or attenuate, or bring into equilibrium, the amount someone drinks.

A person's goals are more likely to centre on maximising immediate pleasure and strict decision-analysis implies that many kinds of unhealthy behaviours, such as drinking and drug use, could be deemed rational (Reyna & Farley, 2006). For example, smoking increases the chances of cancer. However, this is a long-term consequence that is outweighed by the short-term pleasure of nicotine activating dopamine receptors (Scollo & Winstanley, 2008). Consequently, within alcohol consumption, and especially heavy drinking, it could be possible to assume that those who drink a lot choose to do so because they value this immediate gratification more so than the costs and issues related to problems that result from drinking.

1.2 Alcohol Consumption

The context of this thesis will be alcohol consumption. The unearthing of late Stone Age beer jugs has established the fact that intentionally fermented beverages existed at least as early as the Neolithic period (cir. 10,000 BCE.) (Patrick, 1952, pp. 12-13), and it has been proposed that beer may have preceded bread as a staple (Braidwood et al., 1953); wine clearly appeared as a finished product in Egyptian pictographs around 4,000 BCE. (Lucia, 1963, p. 216). Within Australia, rum was used as a currency during colonial times, with a hospital built in Sydney in exchange for the rights to import 60,000 gallons of rum, and 400 gallons of rum being paid for a road to be built between Sydney and Liverpool (Butlin, 2002).

Many authors are adamant that alcohol consumption is a high priority for Australians. “Alcohol and sport, two of Australia's greatest consuming passions, have been interrelated since early in Australian history. In present day the relationship is evident within Australian culture” (Mallam, 2006, p. 42). Heavy alcohol use has long been a part of the cultural identity of Australians, forming a central part of “mateship”, which has themes of egalitarianism, and convivial relationships among workingmen (Heath, 1995). Indeed “intoxication has a particular social position in our societies” (Room, 1992, p. 91). By the 1960s and 70s alcohol was incorporated into everyday life as controls on its availability were liberalised, it became respectable for women to drink alcohol in public, and alcohol was heavily promoted and advertised, largely through the sponsorship of major sports. The re-emergence of wine drinking in the late 1960s also contributed to increased per capita consumption by making the use of alcohol with meals a common event (Heath, 1995). “Increasing access to secondary education in the late 1960s helped to de-stigmatise wine, which had hitherto been the beverage of skid-row drinkers.” (Heath, 1995, p. 16)

Drinking within the workplace is banned in the majority of industries; however, risky and high-risk drinking occur at least occasionally in 44% of Australian workers. Workers in the hospitality, agriculture, manufacturing, construction and retail industries, workers in blue-collar occupations and young workers are identified as at-risk subgroups (Berry, 2007). When Australian police officers were asked to rate the

importance of factors they felt contributed to their drinking, officers rated social factors such as celebration, and socialising with peers as the most important factors; however, factors related to stress emerged as being the most predictive of scores on risky consumption factors (Davey, 2001). Currently within Australia, 86% of Australians aged 14 and above have drunk alcohol one or more times in their lives, and 37% of Australians consume alcohol on a weekly basis (Australian Institute of Health Welfare, 2014). Consuming a lot of alcohol is perceived as negative; however, there are other types of alcohol consumption activities that are also harmful.

A number of different types of risky drinking are shown in the Table 1.1 *Types of Risky Drinking*. Different types of drinking behaviours will lead to different consequences that affect a person's health. Drivers of these behaviours are also outlined; these are the antecedents to the behaviour and consequences. Costs to the Australian Government, both monetary and non-monetary, are also displayed in **Error! Reference source not found.**.1. In terms of risky drinking, many consequences, such as car accidents and health problems, are common. These behaviours can be caused by factors such as peer pressure and the desire for risk taking, costing the government almost $2 billion in associated health care and policing costs (Collins & Lapsley, 2008).

Long-term risky drinking is associated with various cancers and liver cirrhosis (Livingston, 2008). Work stress is a common contributor to daily drinking (Dawson, Grant, & Ruan, 2005), increasing health care costs and lost work productivity (Bouchery, Harwood, Sacks, Simon, & Brewer, 2011). Drinking and driving leads to accidents and fatalities, as well to as property damage. Usually the cause of drink-driving is convenience; for example, someone choosing to drink-drive because it is cheaper than a taxi (Cismaru & Lavack, 2009). Drinking to cope can cause more problems than it can solve and does not actually solve the problems or issues which promoted the drinking in the first place (Dolan & Ender, 2008). Sources include depression and anxiety, resulting in increased costs for health care (Hasin, Goodwin, Stinson, & Grant, 2005). Drinking related violence, such as glassings, can be caused by hyper masculinity and protest masculinity displayed by males (Wells, Tremblay, & Magyarody, 2011). Again, healthcare costs are associated with this type of alcohol

issue, in addition to policing costs and the emotional cost suffered by victims (Perkins, 2002).

Drinking in public can be perceived as convenient for some people. However, this can lead to public property damage and policing costs. Underage drinking and purchasing of alcohol also involves policing costs. Finally, mixing alcohol with medications can lead to adverse effects and the proliferation of the effects of alcohol. This is largely due to a misunderstanding of the problem of mixing drugs and can lead to increased healthcare costs.

Table 1.1

Types of Risky Drinking

Behaviour	Consequence	Drivers	Cost to government	Estimated monetary cost
Short-term drinking	Car accidents, health problems	Peer pressure, risk taking	Healthcare costs, police costs	$1.9 billion health sector
Long-term risky drinking	Health problems in old age, lower quality of life	Work stress, unintentional over-indulgence	Increased healthcare costs, lost work productivity	
Drink driving	Fatalities, property damage	Convenience, cheaper than a taxi	Crime, police costs	$2.2 billion road accidents
Drinking to cope	Can cause more problems, doesn't fix the problem	Depression, anxiety, work stress	Healthcare cost, lost productivity	
Drinking-related violence	Glassings	Hyper masculinity, protest masculinity	Healthcare cost, police costs, crime, emotional cost	$1.4 billion legal
Drinking in public	Public property damage	Convenience	Policing costs	
Underage drinking/purchasing	Fines		Policing costs	
Drinking with medications	Adverse effect, enhancement of alcohol effects	Misunderstanding of problems with mixing drugs	Healthcare costs	

Sources: Collins & Lapsley, 2008; National Health and Medical Research Council (NHMRC), 2009; Rothschild, Mastin, & Miller, 2006; Wollard, 2011.

Policy definitions of alcohol consumption that determine what is and what is not risky drinking have gone through a number of iterations. Currently, the definition of risky drinking is: "for healthy men and women drinking no more than four standard drinks on a single occasion" (NHMRC, 2009). Thus, moderate consumption is drinking three standard drinks or less, on a single occasion. Policy has also defined

what constitutes risky drinking over a lifetime as: “drinking no more than two standard drinks on any day, reduces the lifetime risk of harm from alcohol-related disease or injury” (NHMRC, 2009).

1.3 Research Rationale

Within economically developed countries, the health status of populations now has less to do with acute illness than with lifestyle choices, such as excessive drinking, lack of exercise and proper nutrition (Beard et al., 2012; Contoyannis, Jones & Rice, 2004; Walsh, Rudd, Moeykens & Moloney, 1993). Risky drinking by young Australians (14-24 years old) is a major health concern, with approximately half of 18 year-olds drinking at risky levels (Australian Institute of Health and Welfare, 2004; Australian Bureau of Statistics (ABS), 2012). Twenty per cent of hospitalisations of young people are attributable to alcohol and could have been averted with lower alcohol intake (Chikritzhs & Pascal, 2004). The Foundation for Alcohol Research and Education (FARE) own alcohol study found that 31% of generation Y had not been able to stop drinking once they started, 28% of generation Y could not remember what had happened the night before, and 45% of generation Y had a feeling of guilt or remorse after drinking (FARE, 2014). Alcohol generates some positive effects for society.

In terms of tax revenue generated from alcohol sales, the total for the 2008-09 financial year was $6.1 billion (Webb, 2010). However, the costs associated with alcohol consumption far outweigh this amount. The total social cost of alcohol abuse per year has been calculated at $15.3 billion – almost double that of illicit drug abuse, estimated at $8.1 billion (Collins & Lapsley, 2008). More recent figures which take into account “how individual acts of alcohol misuse ripple through families and communities” (Costello T. , 2010, p. iii) place the figure at $36 billion dollars (Laslett et al., 2010). Clearly, there is impetus for the government to reduce excessive consumption to moderate levels.

1.3.1 Government Initiatives to Reduce Alcohol Consumption

The Australian Government has relied on a variety of initiatives to reduce alcohol consumption (see Appendix A – Australian Alcohol Reduction Initiatives). Didactic educational campaigns in schools and fear-driven advertisements on television have done little to change behaviour, but have raised awareness (Midford & Munro, 2006; Roche et al., 2010). The theoretical justifications for such approaches are tenuous at best, with most trying to make logical leaps of faith which, from an academic or evidence-based point of view, fall far short of being robust, valid or effective (Hastings, 2008). For example, some programmes have relied on the notion that raising awareness of the dangers of drinking will lead to attitudinal changes against drinking excessively, in turn leading to a behavioural change in actual drinking levels. Yet, these types of programmes either rarely work or their impact is not assessed (McKenzie-Mohr, 2013). Information and knowledge type programmes have been found to not reduce alcohol-related harm, but they do play a role in increasing attention to and acceptance of alcohol-related issues on political and public agendas (Anderson, Chisholm, & Fuhr, 2009).

Researchers working with the World Health Organization have commented that "education alone is too weak a strategy to counteract other forces that pervade the environment" (Babor et al., 2010, p. 216). This view is complemented by Midford, Pettingell and Stothard (2006) who suggest that educational programmes should not be implemented to serve as an illusion of prevention when, in reality, nothing of practical benefit is being provided. Indeed, Stothard (2006, p. 209) explicitly points out that many programmes "continue to draw on the information model of health education in the stubborn expectation that knowledge of deleterious effects will act to counter and overcome all existing and accumulated social, cultural and psychological influences on young people." However, educational programmes that utilise interactivity, relevance, and creativity, and focus on harm minimisation, have been found to have tangible benefits in the changed behaviour of 8% of the population in general (Snyder et al., 2004).

A social marketing approach is needed which moves beyond informing and raising awareness (French, Blair-Stevens, McVey, & Merritt, 2010). A deeper understanding

of the consumer is needed, moving upstream from the individual level to the social group level. As drinking is usually a social activity for young adults (Oostveen, Knibbe, & De Vries, 1996), it is likely that the group plays an important role in alcohol consumption levels and related negative outcomes. One such theory that might explain this phenomenon is Köhler's (1926, 1927) motivational gain effect, which postulates that, under certain conditions, group members are more highly motivated than comparable individual performers (Kerr & Hertel, The Köhler group motivation gain: How to motivate the 'weak links' in a group, 2011).

1.3.2 Motives for Drinking

Motivation is likely to change when an individual is in a group, as compared with when they are not (Karau & Williams, 1993). Individual-level research has identified four main motives for drinking: enhancing, social drinking, drinking to cope, and drinking to avoid social rejection (Kuntsche, Knibbeb, Gmela, & Engels, 2005). The results of these motives can either be positive (to enhance positive moods) or negative (to avoid or attenuate negative expectancies). The source of these expected motives can be either internal (personal affective change) or external (regarding the individual's social environment) (Penelope, 2011). Thus, four drinking motives emerge as final antecedents of drinking behaviour: (a) internally generated, positive reinforcement motives (drinking to enhance positive mood); (b) externally generated, positive reinforcement motives (drinking to obtain social rewards); (c) internally generated, negative reinforcement motives (drinking to reduce negative emotions), and (d) externally generated, negative reinforcement motives (drinking to avoid social rejection) (Grant, Stewert, O'Connor, Blackwell, & Conrod, 2007). Although these individual-level motives are useful, they do not give a full picture in terms of alcohol consumption within the friendship group. A group-level motive is a motive or reason for action or intention that the group has as a whole (White, Simpson, & Argo, 2014). Thus, there exists a gap in terms of what group-level motives exist in this space. As mentioned previously, an individual's motives are likely to change when they are in a group and, as such, it is important to study this effect in action.

1.3.3 Group Dynamics

When people drink in a group, individual-level motives may change or become superseded by group-level motivations. One of these effects is known as the Köhler motivation gain effects. This phenomenon finds that less-able workers perform better when they are members of a team than when they are working individually (Messé, Hertel, Kerr, Lount, & Park, 2002). In other words, under certain conditions, when individuals are working in a group, their motivation to perform a task increases. For example, when people are playing drinking games, Köhler motivation gain effect may be activated and participants consume more alcohol than they would if they were by themselves. Therefore, in addition to individual-level motives, there are likely to be group-level motives at play, yet these have yet to be integrated in the literature about risky drinking. The external validity of the effect is largely an open question and needs to be explored empirically in future research (Kerr, Messé, Park, & Sambolec, 2005). Future research should examine other types of tasks and settings (Sambolec, Kerra, & Messé, 2007). Large groups (as opposed to dyads) are needed to test whether gender disparities in motivation gains are moderated by group size (Weber, Wittchen, & Hertel, 2009). Experimental designs where strangers participate are commonplace in group motivation studies; a study involving friends is therefore necessary, as drinking is normally a social activity occurring in friendship groups. Furthermore, collective intentions (i.e. intentions that a group has compared to those of its individual members) has not been examined in a marketing context. This is a stalled field within the marketing literature, with few studies examining its effects.

There are a number of important gaps within the literature and these are summarised as follows. Firstly, there is too much of a dominant focus on individual-level motives with a lack of attention on group-level motives; there is limited research on the midstream impact of group-level motives on alcohol consumption (Wymer, 2011). Secondly, there is a lack of group motivational studies that focus on real-world activities, which occur outside of the lab, and which use participants who know each other, instead of using strangers (Hertel, Kerr, & Messé, 2000; Kerr et al., 2007).

1.4 Research Questions and Approach

The overarching research question is: What role does the group play in influencing alcohol consumption habits? More specifically, within the context of this research, How does the friendship group influence alcohol consumption? From this the research questions to be investigated were developed, shown in Table 1.2.

Table 1.2

Research Questions

Gaps	Aim	Research questions	Study
Evidence to date on drinking motives has focused mainly on individuals; group motivations for drinking are unknown.	To explore how the friendship group can affect alcohol consumption	RQ1 What are the friendship group-level motives for alcohol consumption?	1
Lack of evidence of the impact of group features and group motives on alcohol consumption levels	To examine group level motives and their relationship to alcohol consumption	RQ2a What is the relationship between friendship group alcohol motives and alcohol consumption? RQ2b Do friendship group features moderate the relationship between motives and alcohol consumption?	2

Based on the research questions, the approach to answer them was developed. As shown in Table 1.3, study 1 will sample a group of 18- to 30-year-olds and interview them, using a semi-structured approach. The analysis process used will be template analysis, whereby some pre-coding is developed, but new themes are expected to emerge. Study 2 will sample 252 people, 18 to 30 years old, using a survey methodology. Exploratory factor analysis and multiple hierarchical regression techniques will be used to analyse the data.

Table 1.3

Research Approach

Study	Research approach	Sample	Method	Analysis
1	Qualitative	18- to 30-year-olds in a friendship group	Semi-structured interviews	Template analysis (most pre-coding developed, expect some new themes to emerge)

Study	Research approach	Sample	Method	Analysis
2	Quantitative	18- to 30-year-olds, 250+ sample	Survey	Regression, moderation analysis, and EFA

1.5 Theoretical Frameworks

Köhler's motivational gain effect finds that less-able workers perform better when they are members of a team, than when they are working individually (Messé, 2002). This is due to two complementary mechanisms: social comparison and conjunctive task. Social comparison expresses itself through a more capable partner revising their personal performance goals upward or through doing as well as or better than the partner; a process known as successful competition (Kerr & Hertel, 2011; Stroebe, Strobe, Abakoumkin, & Schut, 1996). Conjunctive task presents the view that the more indispensable or vital that individuals perceive their efforts to be for the group or personal outcomes, the greater efforts they will exert (Hertel et al., 2000). Additionally, when the task is conjunctive (all participants need to work together to achieve a goal), then individuals will increase their efforts. The categories that will be inspected include social comparison, conjunctive task, implicit competition, explicit competition, drinking games, and shots or rounds.

Collective intentions are defined as a commitment of an individual to participate in joint action and involve an implicit or explicit agreement between the participants to engage in that joint action (Tuomela, 1995). This could be expressed as, "We intend to go drinking on Friday." Here, a person plans to participate in a joint activity, but conceives of the activity not so much as individuals performing personal acts that atomistically accumulate and contribute to a group performance, but rather as a group action, where one is a member of the group (Bagozzi & Dholakia, 2006). Importantly, in formulating these social intentions, the activity (and the intention) only has meaning if the group acts in concert (Bagozzi & Dholakia, 2006). Individual action by oneself is not enough to attain one's goal, in either case. For example, one person turning up to a protest defeats the purpose of the protest itself. Furthermore, groups can function together to produce a result not independently obtainable

through an individual's action. Collective intentions are focused on the role of copying behaviours and also competition.

1.6 Contribution to Theory

This thesis contributes to theory in a variety of ways. Firstly, it examines alcohol consumption from the group perspective, rather than the dominant individual perspective (Kuntsche et al., 2005) which arises in the literature. Although individual-level research should remain a fruitful area for research, a group-level perspective remains neglected and may yield valuable insight into drinking behaviours.

Secondly, by using Köhler's motivational gains as a lens to interpret alcohol consumption, support was found for increased alcohol consumption when conjunctive tasks were activated by the group. Evidence for one aspect of Köhler's motivational gains was found by this research: that verbal communication between group members pushed individuals to consume more alcohol. This research also found a new factor involved in Köhler's motivational gains that impacts on the outcome variable being measured, namely copying.

Thirdly, evidence of group-level motives was present in group drinking samples, leading to a number of group-level motives being found. Through interviews, seven group-level motives were identified: competition, copying, commitment, conformity, hedonism, confidence, and winding down.

Finally, these seven group-level motives were operationalised and measured empirically to determine their effect on alcohol consumption, offering a methodological contribution, which is outlined in section 1.8. Of the seven group-level motives uncovered in the qualitative research, four were found to be significantly related to alcohol consumption. The group-level motives that were associated with alcohol consumption were winding down, copying, conformity and hedonism.

1.7 Contributions to Policy and Practice

From a practitioner's point of view, this research may help to guide social marketers in developing programmes that could reduce risky drinking. Additionally, by examining why people consume, a focus on the sources of alcohol consumption can be realised, which should allow practitioners to view drinking not as the problem, but as the symptom of the problem. Once solutions to the problem are designed and implemented appropriately, a reduction in the severity of symptoms should follow.

There should also be a focus on the norm of moderate or no drinking, as opposed to just expressing the dangers of risky drinking. By focusing on moderate drinking, the practitioner can look at this target behaviour that aims to reduce risky drinking. This leads on to the next contribution for practitioners, namely understanding differences between risky drinking and moderate drinking from the consumer's point of view, instead of just relying on the medically prescribed definitions. Although these medically derived definitions are important, they are rarely used by participants when drinking alcohol. Moreover, this is complicated by trying to determine what a standard drink actually is.

Group-level interventions should be used when trying to tackle risky drinking. By focusing on the seven different motives that were uncovered in the data, a programme utilising each one – or multiple motives simultaneously – can be developed. For instance, when examining participants who consume to relax, programmes to reduce alcohol consumption could use mindfulness techniques to achieve the same outcome of relaxation.

1.8 Contributions to Methodology

The methodological contribution in this research is the use of group-level latent variables and measurement of alcohol motives at a group level. Traditionally, motives for drinking alcohol are measured at an individual level (Adams, Kaiser, Lynam, Charnigo, & Milich, 2012), but since young adults traditionally drink with their friends (Overbeek, Bot, Meeus, Sentse, Knibbe, & Engels, 2011) it is important to understand the motives of the group as a whole. Current approaches in group-level

research have emphasised the need for the focal object of a scale to be a group not the individual (Gaur & Tiwari, 2008); for example, a scale measuring copying behaviour that is used at the individual level uses the pronoun "I" while at the group level the "we" pronoun should be used. Prior to this study there were no scales that operationalised group-level drinking motives; therefore, this thesis contributes to research by addressing this pressing gap in the literature. By measuring group-level motives for alcohol consumption through operationalising these constructs at a group-level, a unique understanding of the way in which motives and the friendship group can influence alcohol consumption can be uncovered. However, future research to further develop these scale items and to generate the constructs with a larger sample size is needed.

1.9 Method

The first stage of this research involved qualitative interviews. These semi-structured interviews used an interview guide to lead discussion about the major issues, and involved a dialogue between participants, leading to negotiated results. Interviews were chosen was because they allowed an in-depth understanding of the group motives for alcohol consumption and allowed for probing of responses for further explanation. The interviews were audio-recorded and then transcribed. The transcribed documents were analysed openly, using initial coding. Then, categories were formed, leading to theory being developed. The second stage of the research was quantitative in nature, testing the concepts formed in Study 1 and uncovering their relationships to alcohol consumption. Group-level moderation effects were also tested.

1.10 Scope of Study

The scope of this study is designed to address the research questions in a thorough and timely manner within the context of youth friendship groups and alcohol. This thesis examines Australian young adults aged 18 to 30 and their respective friendship groups. The friendship group members will not be examined directly but indirectly through the respondent. In order to keep the scope of this research focused the group chosen for analysis is the friendship group. This excludes other groups such as sports

teams and working groups, as well as loosely tied groups such as a group of people waiting at a bus stop. Although it is acknowledged that members of different groups can pass through these group boundaries and also simultaneously hold positions in multiple groups, this research focuses on the friendships.

1.11 Definition of Key Terms

The following section will define key terms that are used throughout the thesis. Firstly, social marketing will be introduced. Social marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good (International Social Marketing Association, 2013). The target group for this thesis is the friendship group which is defined as a small, long lasting, highly interactive group which is difficult to enter or exit (Lickel, Rutchick, Hamilton & Sherman, 2006). The friendship group fits within social marketing in terms of target audience. This type of target audience is known as the midstream, which is defined as the people who may influence the target audience (Hoek & Jones, 2011). The two main theories to be explored in this thesis are collective intentions and Köhler's motivation gains effect. Collective intentions are defined as a commitment of an individual to participate in joint action and involve an implicit or explicit agreement between the participants to engage in that joint action (Tuomela, 1995). Köhler's motivational gains effect is defined as the additional benefit gained by low-performing individuals when in a team (Messé, Hertel, Kerr, Lount, & Park, 2002). A group-level motive is a motive or reason for action or intention that the group has as a whole (White et al., 2014).

Alcohol consumption is defined as current consumption of beer, wine or spirits at some baseline or in a reference period (Zeegers, Tan, Verhagen, Weijenberg, & van den Bran, 1999). The specific alcohol behaviours referred to in this thesis are: binge drinking, which is defined as drinking five or more standard drinks on an occasion (Miller, Naimi, Brewer, & Jones, 2007); risky drinking, defined as five or more standard drinks on a single occasion (Australian Institute of Health Welfare, 2014); and moderate drinking, defined as no more than four standard drinks on a single occasion (Australian Institute of Health Welfare, 2014).

1.12 Structure of the Thesis

This thesis has eight chapters. **Chapter 1** gives an introduction to the topic.

Chapter 2 provides a detailed discussion of key literature within social marketing, theories about consumption behaviour in groups, alcohol motives at an individual level and Köhler's motivational gains. Key gaps in the research are also outlined, with corresponding research questions developed.

Chapter 3 outlines the methodology for the first study: the qualitative phase. Philosophical paradigms for the research are discussed, with post-positivism chosen for the research. Sampling, recruitment and selection are detailed, with ethical implications explained. The research setting, organisation, recording and transcription, as well as the data analysis strategy, are outlined.

Chapter 4 details the results of the qualitative stage. This chapter provides a data log of how, when, and where the data was collected from respondents, as well as detailing features of the interview participants. Respondents' interpretations of risky drinking are explored, as well as the effects of social comparison, indispensability and conjunctive task. The role of gender in alcohol consumption is also examined.

Chapter 5 presents a model of group consumption, identifying the constructs to be tested. The hypothesised relationships between the variables are described, with 31 hypotheses developed.

Chapter 6 details the analysis procedure and methodology for the regression model. The sampling process is outlined and discussed. The survey design and construct measures are summarised, with reliability scores displayed.

Chapter 7 presents the results of the data analysis and model testing. Preliminary data analysis is conducted with an assessment of data preparation, treatment of missing data, identification and examination of outliers, assessment of normality, assessment of multicollinearity and an exploratory factor analysis on each construct.

Chapter 8 draws upon both studies to address the research questions by discussing the overall research question, the findings of each study, contributions to theory and practice and the limitations and future directions for research.

1.13 Summary

This chapter has outlined the research rationale, purpose and approach to be taken. A proposed research programme was presented, which outlined the key gaps in the literature, the research questions, sampling method, research methods, and the analysis procedure to be used. Finally, the potential contributions to marketing theory and practice were summarised. The next section presents a background on social marketing and a critical view of the relevant literature.

Chapter 2 Literature Review

"If you create an environment where it's promoted relentlessly, when you make alcohol widely available all through the day and night, and when its price becomes lower and lower; these are social factors which act against the idea of personal responsibility."

(Webster, 2010)

2.0 Introduction

Social marketers may have limited their programmes' effectiveness by having an over-reliance on commercial marketing tactics and an over-emphasis on individual behaviour change (Wymer, 2011). An individual emphasis remains evident in social marketing programmes seeking to minimise harm from alcohol (Kubacki, Rundle-Thiele, Pang, & Buyucek, in press). In order to improve social marketing campaigns, there should be more focus on midstream factors, which are the people who may influence the target audience (Hoek & Jones, 2011). There has also been a lack of focus on the environment, which refers to the natural and constructed settings in which the human activities of a community take place and includes the social and ecological context within which a community lives (Wymer, 2011). Thus, we should be looking at the group motives for drinking and how the social environment can affect drinking practices and alcohol-related consequences.

This chapter will outline social marketing's focus, explore consumer behaviour in groups, define what a group is, identify individual motives for drinking and critically review the theories of group motivational gains and collective intentions, as well as identifying the gaps within these literature streams.

2.1 Midstream Approach to Social Marketing

"Social Marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good" (International Social Marketing Association, 2013, p. 1). Many definitions of social marketing have been developed and refined, and it is more than likely that this process will continue into the future. However, most definitions have

key themes running through them. Social marketing employs commercial marketing techniques, such as customer orientation, market research, segmentation, competitive analysis and the marketing mix, to bring about voluntary behaviour change (Hastings, 2008). Social marketing's ultimate outcome is behaviour change, not just raising awareness or attitudinal change (Andreasen, 2002). Social marketing campaigns should be theory driven, meaning that theory is used to inform and guide programme development (French et al., 2010).

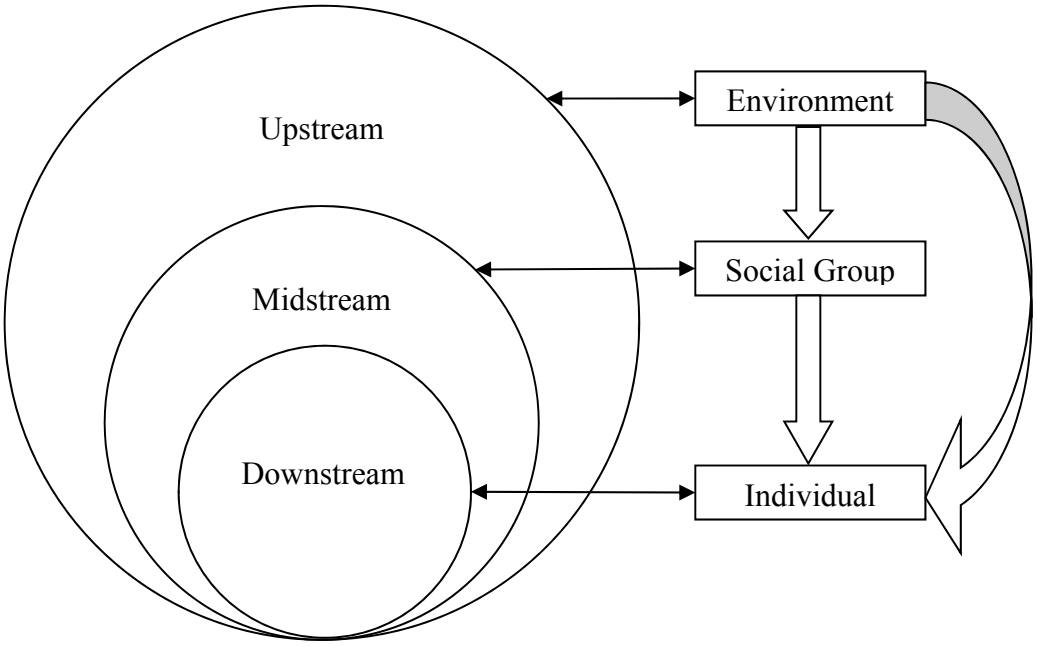
The overwhelming majority of social marketing programmes and research is focused on influencing an individual to change his or her behaviour (Gordon, McDermott, Martine, & Martine, 2006; Helmig & Thaler, 2010). This approach may be useful for individuals who find it easy to change their behaviour or have the motivation to do so; however, some social problems – such as those requiring a remedy that is not under an individual's control or where the problem is only partially under their control – are harder to address when solely using an individual focus (Wymer, 2011). Such external issues could include peer pressure to consume alcohol or a lack of fruit and vegetables at competitive prices.

Most social marketing literature and programmes focus on the downstream. There is a growing area of upstream research focusing on influencing government policy; however, there is limited research on the midstream. The midstream is usually defined as the people who influence the target individual (Hoek & Jones, 2011). The midstream approach to social marketing is a nascent field which lacks theoretical contribution and there are various disagreements on definition, as Russell-Bennett, Wood and Jo (2013) point out. Russell-Bennett et al., (2013) merge midstream social marketing with service marketing research to expand the definition of midstream from stakeholders to include service delivery employees. The literature surrounding the different streams will be detailed in the next subsections.

2.1.1 Upstream, Downstream and Midstream

Social marketers tend to focus on individual behaviours as the cause of disease and deflect attention away from harmful products and the environment through which these products are made available (Wallack, Dorfman, Jernigan, & Themba, 1993).

Social marketing has a very dominant downstream focus, by looking at the individual consumer's behaviour (Kubacki et al., in press). Wymer (2011) and Hoek and Jones (2011) suggest researchers should move beyond this downstream level and explore environmental forces, known as upstream and midstream factors. Upstream factors represent the environment, and include factors such as the promotion of alcohol products and the increasing number of drinking venues made available to customers, the increased numbers of liquor licenses made available and the enlarged use of lobbyists to influence policy makers to legislate. Midstream factors are the people who can affect the individual, such as family, friends and peers, and downstream factors are the individual themselves (Hoek & Jones, 2011). As shown in *Figure 2.1*, all these factors work together to affect the individual's behaviour.



Adapted from: Cheng, Kotler & Lee, 2011, p. 7

Figure 2.1. Upstream, Midstream and Downstream factors

New research has developed a theoretically informed framework that conceives social marketing in interaction, by incorporating both upstream/midstream structural components and downstream concerns with individual actions (Cherrier & Gurrieri, 2014). There has been a lot of work on the midstream impact of peer pressure on alcohol consumption (Borsari & Carey, 2003; Crawford & Novak, 2007; Kinard & Webster, 2010), but there is limited research on the midstream impact of group-level

motives on alcohol consumption. Lee and Kotler (2011) discuss social marketing at the juncture between primary audience (downstream), policymakers and corporations (upstream), and friends, family and influential others (midstream). French et al., (2010) offer the eight-point benchmark criteria for social marketing (which situate the customer at the centre of social marketing), whilst recognising the importance of the social context as influencing individual behaviour (Cherrier & Gurrieri, 2014). Thus, this thesis adopts a midstream approach to study the influence of social behaviour on alcohol consumption, specifically: How do friendship groups influence alcohol consumption?

2.1.2 What is a Group (and What is Not a Group)?

Social scientists and society use the word *group* to describe a wide array of social entities (Hamilton, Sherman & Lickel, 1998; Lickel, Hamilton & Sherman, 2001). Thus, Australians, women, university students, and people who like the classical works of Mozart, can all be referred to as groups, even though these groups differ from each other in fundamental ways (Lickel et al., 2001). Groups vary greatly in the extent to which they are seen as being coherent units (Lickel et al., 2000). For example, people who collaborate in teams for work would likely have different levels of group cohesion compared with a group of people waiting at a bus stop. A group of people and a crowd of people differ quite considerably, in both definition and conceptualisation. A group is defined as persons knowing each other and being unified, coherent and organised in some way (Cartwright & Zander, 1960; Seashore, 1954). A crowd however, is a temporary gathering of individuals who share a common focus of interest (Forsyth, 2010), such as music or a sporting event.

Two criteria for determining a group's existence are *group entitativity* and *group cohesiveness*. Group entitativity is the degree to which a collection of persons is perceived as being bounded together in a coherent unit (Campbell, 1958), whereas group cohesiveness refers to the degree to which different groups are actually unified, coherent and organised (Cartwright & Zander, 1960; Seashore, 1954).

Four types of group entitativity are identified by Lickel et al., (2000): (1) intimacy groups, including family and friends; (2) task-oriented groups, referring to interest

groups, committees or work groups; (3) social categories, which can include ethnicity or nationality; and (4) loose associations, indicating weak social relationships, such as people who enjoy classical music. Although Lickel et al., (2000) study identified groups based on group entitativity (as opposed to group cohesiveness), some of those groups identified are likely to be cohesive and thus to be bound together by patterns of interdependence (mutual dependence), rather than similarity (Lewin, 1948; Wilder & Simon, 1998) – especially intimacy groups and task groups. Each group, its definition, and some examples are shown in Table 2.1.

Table 2.1

Group Types

Group type	Definition	Examples
Intimacy groups	Small, long lasting, highly interactive, difficult to enter or exit	Friends and family
Task-oriented groups	Small, interactive, not as long-lasting or as impermeable as intimacy groups	Work group, committees, interest groups
Social categories	Larger groups with long histories, impermeable boundaries, only modest amount of interaction among members	Gender, ethnicity, nationality
Loose associations	Low level of interaction, short duration, easily joined or left	People who enjoy classical music

Source: Adapted from Lickel et al., 2006

Intimacy groups are small, long lasting, highly interactive and difficult to enter or exit, and include friends and family (Lickel, Rutchick, Hamilton, & Sherman, 2006). People value intimacy groups more highly than other types of groups (Lickel et al., 2000). Task-oriented groups are small, and interactive, but are generally not as long lasting or as impermeable as intimacy groups, such as work groups or interest groups (Lickel et al., 2006). The group definition used for this thesis involves a high level of closeness between the individual and another person who is not in their family (Shkurko, 2014), a person's view of their friendship group which circumscribes an intimacy group. This definition was chosen because, compared with other types of groups, an intimacy group is usually small, allowing participants to talk about every member in the group; long lasting, meaning the group has a shared history; and is highly interactive, giving group members the ability to affect and be affected by other members of the group (Lickel et al., 2000).

Groups can be studied at a variety of levels, as shown in Table 2.2**Error! Reference source not found.**. As outlined by Nijstad and Knippenberg (2009) these levels are: (1) the individual level, where research tends to focus on the changing relationship between the group and its members; (2) the group-level, which looks at group development, group structure including status and roles, and group norms; and lastly (3) the intergroup level, or the wider context in which groups are situated, and how this shapes group behaviour. The group definition used for this thesis will encompass a person's view of their friendship group which circumscribes an intimacy group. This definition was chosen because compared with other types of groups, an intimacy group is usually small, allowing participants to talk about every member in the group; long lasting, meaning the group has a shared history; highly interactive, giving group members the ability to affect and be affected by other members of the group; and, finally, difficult to enter or exit, giving the research a good boundary to study within.

These next sections will focus on individual and group-level motivations occurring within a group.

Table 2.2

Three Levels of Group Analysis

Level	Individual level	Group level	Intergroup level
Definition	Changing relations between the group and its members	Group development, group structure (statues & roles) and group norms	The way group members think, feel and act towards members of other groups.
Relevant theories	**Socio-biological perspective** • Need to belong **Cognitive perspective** • Social identity • Self-categorisation **Utilitarian perspective** • Social exchange theory	**Group norms** **Group cohesion** • Task cohesion • Interpersonal cohesion **Social shared cognition & affect** • Transactive memory **Expectation states theory**	**Self-categorisation** • Social identity

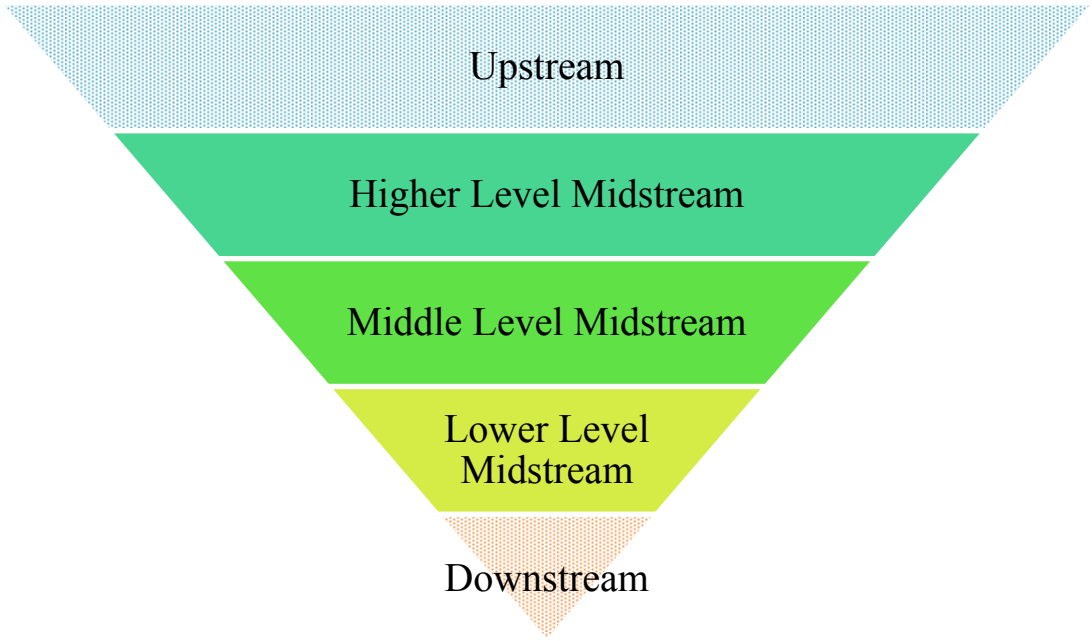
Adapted from: Nijstad & Knippenberg, 2009

2.1.3 Emerging Midstream Research

Due to the growing and emerging research on midstream influencers there is considerable debate surrounding its definition and boundary conditions. For example, French (2014) describes midstream activities as a focus on helping people cope with and improve their ability to deal with poor social conditions and immediate threats to their own and their family's/community's well-being. Lagarde (2014) defines the midstream as simply community participation, which is rather broad. Gordon (2013) refers to midstream social marketing as the impact that people's more immediate environment such as workplaces, schools, local communities, and service delivery organisations has on behaviour. Applying services marketing thinking, Russell-Bennett, Wood, and Previte (2013) propose that midstream social marketing should also include how services and service employees influence and support behaviour change. Russell-Bennett et al., (2013) acknowledge that there is a general lack of theory about midstream social marketing, and that there are also conflicting definitions of midstream social marketing within the literature. Furthermore, some authors advocate a "policy-centric" approach which defines midstream as delivered by policy (Swinburn, 2009; Doftman et al., 2009), whereas others define midstream as partnering with influential people (Largarde, 2012). These various definitions of the midstream are somewhat divergent in scope; therefore, this thesis will create a new conceptualisation.

A clear trend can be seen within definitions of midstream: some definitions are closer to the downstream target, such as friends and family; some are broader and include the community or even nations. Based on exploration of these levels within levels, this thesis proposes that the midstream level can be split into three more levels, as shown in *Figure 2.2*. Firstly, on the lower level midstream, are people who are very close to the target individual, including friends and family. The second level is the middle midstream: this level includes groups that affect the individual but are not friends or family, such as classmates, local neighbourhood, teachers or coaches. The third level is the higher level midstream, which includes the whole community or even a nation. For the purposes of this research the lower-level midstream conceptualisation was chosen, since this level focuses on the impact of friends and

family on the target individual. As this research examines the influence of the friendship group, this lower-level midstream conceptualisation fits well.



Adapted from: French (2014), Lagarde (2014), Gordon (2013)

Figure 2.2. Levels of Midstream

2.2 Groups

Consuming in groups can be defined as two or more people who interact to accomplish either individual or mutual goals (Willott & Lyons, 2011). An important subject in group-consumer behaviour is reference groups. These serve as points of comparison for a person in forming general or specific values, attitudes or certain behaviours (Willott & Lyons, 2011). These reference groups can be associative (where a person belongs to a formal or informal group) or dissociative (groups whose values the individual rejects and to which the individual does not belong) (McCreanor, Barnes, Gregory, Kaiwai, & Borell, 2005).

An example of this in a health context is when Berger and Rand (2008) found that college freshmen reported consuming less alcohol, and restaurant patrons selected less fattening food, when drinking alcohol and eating junk food were presented as markers of avoidance groups. In the case of the college freshmen, the avoidance

group was graduate students; for the restaurant partrons the avoidance group was online gamers. Although not technically social marketing – as the experiment only used advertising which would need to be constantly redeveloped to maintain impact (Bass, Bruce, Majumdar, & Murthi, 2007) – this study suggests how groups can bring about changes in consumer behaviour. However, it should be noted that these groups were not part of the target audience's inner circle of friends and may not have affected behaviour directly on a daily basis, like friends would.

After their family, an individual's friends are the most likely group to influence an individual's purchase decisions (Willott & Lyons, 2011). As alleged by Schiffman et al., (2008, p. 279), "Marketers of products such as brand-name clothing, fine jewellery, snack foods and alcoholic beverages recognise the power of peer group influence and frequently depict friendship situations in their ads." Traditionally, researchers have focused their attention on the individual, with respect to the group. However, this marginalises viewing the group as a whole.

Adolescent snacking behaviour has been shown to be heavily influenced by peers, with peer social influence having more effect on what adolescents perceive as important snack attributes, as compared with more personal factors. Furthermore, adolescents purchase and consume snacks that support their self-image when socialising with other peers (Nørgaard, Hansen, & Grunert, 2013). Complementing this viewpoint, Pfeffer (1985, p.400) writes, "the effect of others in the individual's environment on both attitudes and behaviour is one of the oldest and most prominent themes in the literature of both sociology and social psychology." Social modelling (i.e. learning occurring through observing others (Bandura, Social learning theory, 1977) has also been shown to be an important influence on a range of health behaviours, including alcohol consumption (Wood, Read, Mitchell, & Brand, 2004).

2.3 Youth Drinking Behaviour

This research will specifically examine young adults aged 18 to 30; however, it is important to discuss the life course a young adult takes. This journey from adolescence to young adulthood is now discussed.

As adolescents grow, they begin to spend more time with their peers than they do with their parents (Dotson & Hyatt, 2005). This peer group exerts a more irrational influence on the youth, derived from the need to be accepted by the group (Dotson & Hyatt, 1994; Leung, Toumbourou, & Hemphill, 2014). Sancho, Miguel and Aldas (2011) found that there exists a positive relationship between the peer frequency of alcohol consumption perceived by the young individual and the alcohol consumption intention of the young individual. These authors also examined the role of three socialisation agents (parents, peers, and advertising) on alcohol consumption and found that, for adults, alcohol consumption is directly and highly determined by brand recall and negative expectancies and, to a lesser extent, by positive expectancies and peer consumption (Sancho, Miguel, & Aldas, 2011).

Young adults also consume alcohol in higher volumes than any other age group (Fillmore, et al., 1991). Research consistently shows that people tend to consume most heavily in their late teens and early to mid-twenties (Naimi, Brewer, Mokdad, Denny, Serdula, & Mark, 2003). On a normal night out, 29% of 18- to 24-year-olds report consuming 7+ standard drinks and, on a self-defined "big night out", nearly 30% of 18-24 year-olds report consuming 11+ standard drinks (DrinkWise, 2014). As young people begin to assume more adult roles (e.g. full-time employment, marriage, parenthood), they often reduce their drinking (U.S. Department of Health and Human Services, 2006).

Sources of alcohol for young adults and adolescents were examined by Pettigrew, Pescud, Jarvis and Webb (2013). Four main sources of influence were uncovered, namely: parents, older youth, siblings, and police. Through these sources, six different types of mechanisms of influence were found: (1) expectations set by parents; (2) the vigilance of parental monitoring; (3) access to alcohol, either through a supplier or without permission; (4) ignorance, by youth drinking in secret; (5) tolerance, whereby drinking was condoned by allowing it to occur; and (6) modelling, whereby young adults model drinking behaviours of older youth. The sources, mechanisms and definitions of influence are details in Table 2.3.

Table 2.3

Social Influencers in Alcohol

Sources of influence	Mechanism of influence	Definition
Positive influencers (discouraging consumption) Parents	Expectations	Expectations of facing parents after a "big night"
	Vigilance	By their very presence parents can effectively prevent youth drinking
Negative influencers (encouraging consumption) Parents	Access	Access to alcohol from supplier or without permission
	Ignorance	Drinking was undertaken in secret to prevent their parents from becoming aware
	Tolerance	Condone teen drinking by allowing it to occur.
Older youth	Access	*As above*
	Modelling	Young people may actively monitor the consumption behaviours of older youth to obtain guidance in how to act in ways that are considered socially acceptable by their peers
Siblings	Access	*As above*
Police	Tolerance	*As above* i.e. "The police just say to us 'go home and drink there.'"

Adapted from Pettigrew et al., 2013

The potential of these group-level theories, serve as an important explanation as to how a group can affect mutual consumer behaviour and consumption.

2.4 Alcohol Motives at the Individual Level

Within social psychology, motivation has been defined as "goal-directed" arousal (Park & Mittal, 1985), which can emerge from previous goal-seeking behaviour, encompassing both the processes involved in setting goals and a desire to achieve them (Bagozzi & Dholakia, 1999). Motivation can be sequential, starting with a need forming, then an incentive and finally, a force (behaviour tendency) (Weiner, 2012). Therefore, motivation serves as an important factor in the adoption or assertion of behaviour.

Drinking motives are important because they have been posited as the final decision about whether to consume or not to consume and therefore, the most proximal factors for engaging in drinking (Carpenter & Hasin, 1998; Cox & Klinger, 1988; Cox & Klinger, 1990; Cooper, 1994; Kuntsche & Kuntsche, 2009). Drinking motives are assumed to be the final pathway to alcohol use and represent the gateway through which more distal influences, such as personality characteristics, are mediated

(Catanzaro, 2004; Cooper, Frone, Russell, & Mudar, 1995; Cronin, 1997). However, this point of view is heavily focused on the individual. Group norms, collective cognitions and conjunctive tasks are likely, at times, to override this individual autonomy (Kerr & Hertel, 2011; Nijstad & Knippenberg, 2009). For example, being bought a drink without asking for one or participating in drinking games could increase a person's alcohol intake without them explicitly having the motive to consume more. Observational research has previously indicated that alcohol consumption is higher when people are purchasing alcohol in rounds (Rundle-Thiele, 2009). This research demonstrated that people who were in shouts or were buying drinks in rounds drank more (4.3 standard drinks) than people who were not in shouts (2.6 standard drinks). The underlying motives for the observed behaviours were not explored representing an opportunity for future research.

Drinking motives are based on the assumption that people consume in order to attain certain valued outcomes (Cooper, 1994; Cox & Klinger, 1988). Furthermore, drinking behaviour is assumed to be motivated by different needs or to serve different functions, with specific drinking motives being associated with unique patterns of precursors and consequences (Kuntsche et al., 2005). Essentially, drinking motives represent a subjectively derived decisional framework for alcohol use, based on personal experience, situation and expectancies (Carpenter & Hasin, 1998; Cox & Klinger, 1988; Jester et al., 2015).

Various approaches to measuring drinking motives have been adopted in the past. Firstly, qualitative approaches, which simply asked young people to classify why they consume (Alvarez & del Rio, 1994; Palmqvist, Martikainen, & von Wright, 2003). Secondly, studies which collected items on reasons for drinking from previous research without explicitly classifying them into broader categories of motives (De Micheli & Formigoni, 2002). Thirdly, studies which developed multidimensional questionnaires to measure drinking motives (Kuntsche et al., 2005). And lastly, studies which used previously developed, evaluated, and established questionnaires, of which the Drinking Motive Questionnaire (DMQ) is the most common. It was developed based on the Motivational Model of Alcohol Use (Cox & Klinger, 1990) and has been confirmed in different samples (MacLean & Lecci, 2000; Stewart, Loughlin, & Rhyno, 2001).

Within the DMQ, the results of all expected effects can either be positive (to enhance positive moods) or negative (to avoid or attenuate negative expectancies). Further, the source of these expected effects can be either internal (personal affective change) or external (regarding the individual's social environment). Thus, four drinking motives emerge as final antecedents of drinking behaviour: (a) internally generated, positive reinforcement motives (drinking to enhance positive mood); (b) externally generated, positive reinforcement motives (drinking to obtain social rewards); (c) internally generated, negative reinforcement motives (drinking to reduce negative emotions), and (d) externally generated, negative reinforcement motives (drinking to avoid social rejection) (Grant, Stewert, O'Connor, Blackwell, & Conrod, 2007). By adopting a specific reason for drinking, the decision for engaging in alcohol consumption is made (Kuntsche et al., 2005). Each of these individual-level motives is shown in Table 2.4.

Table 2.4

Individual Level Motives for Drinking

	Internal (personal affective change)	**External (individual's social environment)**
Positive (enhance positive mood)	a) Enhance positive mood	b) Obtain social rewards
Negative (reduce negative expectancies)	c) Reduce negative emotions	d) Avoid social rejection

Source: Kuntsche et al., 2005

The motivational model above assumes that an individual makes a selection about whether or not he or she will consume alcohol. The decision to consume is a mixture of rational and emotional processes, in that the decision is made on the basis of the affective change that the person expects to attain by drinking, compared with not drinking (Kuntsche et al., 2005). The affective change can either be related to the direct chemical effects of alcohol (e.g. mood enhancement or tension reduction) or the indirect effects, such as peer approval (Cooper, 1994; Cox & Klinger, 1988, 1990). It is important to note that a person does not have to be aware of either having made a decision to consume or the factors affecting this decision – decisions about drinking can even be unconscious and automatic (Kuntsche et al., 2005), in which case, motivations may not apply or may not be able to be correctly articulated.

However, Kuntsche's (2005) framework is limited in that it focuses on individual-level attributes. Drinking is rarely a solitary affair, at least for most young adults (Bot, Engels, & Knibbe, 2005). Taking a midstream approach would lead to more nuanced explanations of drinking behaviour. These social groups represent midstream factors, which have "the ability to influence others in the target markets' community" (Cheng, Kotler & Lee, 2011, p. 7), and are an under-valued and under-researched area (Lefebvre, 2011; Wymer, 2011).

2.5 A Midstream Approach to Alcohol Motives

Peers are seen as the most consistent and the strongest factor in the initiation and maintenance of alcohol use in adolescents and young adults (Petraitis, Flay, & Miller, 1995). The impact of the selection of friends and the influence of friends changes over time, such that influence is only present during early adolescence, whereas selection is present during mid-adolescence (Mercken, Steglich, Knibbe, & de Vries, 2012). Furthermore, in a social network study, it was found that clusters of alcohol drinkers and abstainers were not only due to selective formation of social ties among drinkers, but also seem to reflect interpersonal influence (Rosenquist, Murabito, Fowler, & Christakis, 2010). Additionally, changes in the alcohol consumption behaviour of a person's social network have a statistically significant effect on that person's subsequent alcohol consumption behaviour, with friends and relatives, but not co-workers or neighbours, significantly associated with a person's drinking behaviour (Rosenquist et al., 2010). Overall, research "supports group-level interventions to reduce problematic drinking" (Rosenquist et al., 2010, p. 425), as the friendship group serves as an important factor in alcohol consumption.

2.6 Framework 1: Köhler's Motivational Gains

The first framework to be used in this thesis is Köhler's motivational gain effect. Motivation is likely to change when an individual is in a group, compared with when they are not (Karau & Williams, 1993). One of these effects is known as the Köhler motivation gain effect (1926, 1927), which finds that less-able workers perform better when they are members of a team than when they are working individually (Messé et al., 2002). Otto Köhler, a German researcher, found that when members of

a Berlin rowing club were asked to do bicep curls in pairs, they tended to work harder at this physical persistence task than when performing individually (Köhler, 1926). Essentially, the presence of another person increased the effort by both people. Since Köhler's motivation gain effect was first outlined by Köhler in 1926, a considerable amount of research has been undertaken (see Table 2.5).

Table 2.5

Summary of Köhler's Motivational Gains Literature (Studies since 2000)

Authors (year)	Context	Method
Brodbeck & Greitemeyer (2000)	Provide evidence that, as a consequence of four types of group learning, groups increase their potential, reduce process losses and increase the likelihood of developing process gains.	E
Hertel (2000)	Review of motivational gains in groups.	R
Hertel, Kerr, Scheffler, Geister, & Messé (2000)	Replicate and further explore instrumentality effect using physical persistence.	E
Hertel, Kerr, & Messé (2000)	Replicated, discrepancy in co-workers' capabilities did not moderate these motivation gains. Effect occurred under conjunctive, but not additive task demands.	E
Lount, Messé, & Kerr (2000)	Males tended to show even greater motivation gain when paired with a more capable female.	E
Messé, Hertel, Kerr, Lount, & Park (2002)	Both experiments found (a) overall motivational gains and (b) discrepancy moderation under foreknowledge conditions.	E
Witte (2002)	Definitions of terms, empirical observations and theoretical concept.	E
Messé, Hertel, Kerr, Lount, & Park (2002)	For conjunctive tasks, participants' relative ability can moderate motivation gains in the weaker worker. Different combinations of participant attributes generated different group performance outcomes.	E
Heterl, Deter, & Konradt (2003)	Motivational gains can be produced in computer-supported dyads, even without face-to-face interaction.	E
Kerr et al., (2005)	Continuous feedback of both members' performance was not necessary for producing the effect; the effect was attenuated, but not eliminated by delaying/restricting feedback; motivation gain was eliminated in the absence of any performance feedback.	E
Todd, Seok, Kerr & Messé (2006)	Previous research may have underestimated the magnitude of the social compensation effect.	E
Baranski et al., (2007)	Performance loss associated with fatigue attributable to sleep loss was mediated by being part of a team, as compared with performing the same task individually.	E
Weber & Hertel (2007)	Overall motivation gain effect of inferior group members observed is moderated and significant.	E
Kerr et al., (2007)	Gender difference was eliminated by priming women with a goal (viz., competition) presumed to be chronically more important to men.	E
Wittchen, Schlereth & Hertel (2007)	This finding provides evidence that motivation gains among inferior group members are possible even during sequential group work under highly anonymous conditions.	E
Sambolec, Kerra, & Messé (2007)	When competitiveness is made salient by priming, those who work alone still have no one with whom to compete. If competition means to do one's best in relation to others, it seems clear that priming would not affect performance in the individual condition. It is likely that subtly activating competitiveness will enhance performance in settings where such competition is possible.	E
Lount, Kerr, Messé, Seok, & Park (2008)	Results revealed that motivation gains became smaller over time, these gains in effort still remained statistically significant across several work trials (6).	E
Lount, Park, Kerr, Messé, & Seok (2008)	As anticipated, motivation gains were significantly greater for participants who worked in the physical presence of their co-worker. Irrespective of the physical location of one's partner, men tended to work harder with female co-workers compared to male co-workers.	E
Gockel, Kerr, Seok & Harris (2008)	The indispensability of effort had a positive effect on participants' effort. Group identification had no direct or moderating effects on effort.	E
Hertel, Niemeyer, & Clauss (2008)	Results reveal motivation gains only when partner feedback was contemporaneously available.	E
Kerr, Seok,	It is argued that social ostracism can undermine group members' concern for group success or	E

Authors (year)	Context	Method
Poulsen, Harris, & Messé (2008)	for protecting their reputation in the group without affecting the social comparison processes that also contribute to the Köhler effect.	
van Dick, Tissington & Hertel (2009)	Social loafing can be overcome and that even motivation gains in group work can be expected when groups are important for the individual group members' self-concepts.	E
Weber, Wittchen & Hertel (2009)	Results revealed that motivation gains due to social indispensability were more likely for women, whereas motivations gain due to social competition were more likely for men. Furthermore, women compared to men showed higher motivation gains in anonymous conditions compared to conditions with an acquainted partner.	E
Hüffmeier &Hertel (2010)	Consistent with our hypotheses, these process gains seem to result from two different sources, i.e. intergroup competition and social indispensability.	E
Kerr & Hertel (2011)	The basic effect is attributed to two psychological mechanisms, one involving upward social comparisons and a second involving the indispensability of group members' efforts.	E
Wittchen (2011)	Increased effort during intergroup competition is explained based on (a) the degree of deliberate and systematic information retrieval and processing and (b) the degree of collective self-construal within the groups	E
Hertel (2011)	Based on the definition of synergy as process gain during teamwork compared with a clear baseline (team potential), this review develops specific requirements for the empirical demonstration of synergetic effects in teams.	E
Hüffmeier & Hertel (2011)	In general, the MSST predicts that social recognition and social encouragement lead to motivation gains, whereas information-related and behavioural task support lead to coordination gains.	E
Hüffmeier, Krumm, Kanthak & Hertel (2012)	Swimmers were faster in the relay groups as compared with individual competitions only when (i) a swimmer's performance was highly instrumental for the group's performance (i.e. later serial position in the relay) and (ii) the group's performance was highly instrumental for a positive group outcome (i.e. the relay group had a good chance of winning a medal).	E
Kerr, Forlenza, Irwin, & Feltz (2013)	An experiment is reported that contrasts having a partner who is more capable on all/both exercise tasks with one who is more capable on the focal task, but inferior on the second task. The Köhler effect on the focal task was replicated and unmoderated by the uniformity of the partner's exercise superiority.	E
Feltz, Forlenza, Winn, & Kerr (2014)	These results suggest that a software-generated partner can elicit the Kőhler motivation gain in exer-games, but not as strongly as a partner who is thought to be human.	E
Hüffmeier, Wessolowski, van Randenborgh, Bothin, & Hertel (2014)	Together, the results demonstrate that receiving social support from fellow group members leads to higher effort in groups at the level of existing beliefs about motivating group work, at the level of effort intentions, and at the level of manifest performance behavior. The observed findings cannot be explained by established sources of motivation gains in groups such as social comparison or social indispensability.	E

Note: In the Method column E = experiments, R = review papers.

Köhler (1926, 1927) attributed the remarkably high performance of groups to group members mutually "infusing" one another with enthusiasm for the task. He also assumed that the stronger member of the group took a leadership position by coordinating efforts and encouraging the less capable partner (Kerr & Hertel, 2011). However, although these postulations are somewhat logical, they are not consistent with more recent research (Köhler, 1926; Hertel et al., 2000; Weber & Hertel, 2007). For example, verbal encouragement has yet to be documented with regards to this phenomenon. Two distinct psychological mechanisms have been brought forward to offer theoretical explanations for the Köhler's motivation gain: social comparison and indispensability/conjunctive task.

Firstly, the social comparison process (Stroebe et al., 1996) stresses that, when working with a more capable partner on a valued task, individuals may revise their personal performance goals upward. This could possibly express itself in a drinking

environment where others are drinking large amounts and an individual increases their drinking to keep up. Another point of view is that doing as well as or better than the partner – a process known as successful competition – may become desirable (Kerr & Hertel, 2011). This may express itself in drinkers trying to "win" by drinking larger amounts than their friends. Thus, two sub-mechanism competitions seem to exist; one of explicit/direct competition (trying to win) and one of implicit/indirect competition (keeping up).

Secondly, one's indispensability to the group (Hertel et al., 2000) posits that, the more indispensable that individuals perceive their efforts are for the group or personal outcomes, the greater the efforts they should exert (Kerr & Hertel, 2011). In other words, the motivation gain is significantly higher when the least capable member's efforts are highly indispensable (e.g. under conjunctive task demands) than when they are not (e.g. under additive or coactive task demands) (Hertel, Niemeyer, & Clauss, 2008; Hertel et al., 2000; Kerr et al., 2007). Essentially, when the task is conjunctive (all participants need to work together to achieve a goal), then individuals will increase their efforts. As shown in the Table 2.6, an additive task is one where the group output is the sum of all the members' contributions, whereas a conjunctive task is one where the group output is determined by the individual with the poorest performance. This is analogous to the weakest link theory, whereby a chain is only as strong as its weakest link. Each of these types of tasks is detailed in Table 2.6.

Table 2.6

Types of Tasks

Task type	Definition	Implication
Additive	The group product is the sum of all the members' contributions.	People often indulge in social loafing during additive task, which creates process losses.
Conjunctive	The group product is determined by the individual with the poorest performance.	People increase their effort to help the person with the lowest performance
Disjunctive	The group product is (or can be) determined by the performance of the individual with the best performance.	A winner takes all mentality

Source: Kassin, Fein, & Markus, 2011, p. 310

Some studies seem to rule out this social comparison explanation (Hertel, Deter, & Konradt, 2003; Hertel, Kerr, Scheffler, Geister, & Messé, 2000). However, this is likely due to their research design, as newer work on the topic has found that social

comparison is sufficient to explain the motivational gain effect (Sambolec, Messé, & Kerr, in press; Waszek & Hertel, 2003; Wittchen, 2002). Whilst initially Köhler's group motivation gain was thought to be distinct and not simply a manifestation of some other motivation gain phenomena (Hertel, Kerr, & Messé, 2000), it is now thought that there is probably not a single, unitary explanation for the motivation gain phenomenon (Kerr et al., 2005). A number of psychological processes are likely to be involved, such as the presence of audiences or co-actors, implicit or explicit competition and group composition (Hertel, Kerr, & Messé, 2000).

Table 2.7

Possible Group Motives That Increase Risky Drinking

Phenomena	Definition	Expected manifestation
Competition	Competition exists when people work against each other to achieve a goal that only one or a few may attain (Oermann & Heinrich, 2006).	Counting the number of drinks consumed, comparing it to others in the group and trying to achieve the highest number.
Conjunctive task	Conjunctive tasks depend on every member playing his or her part (Smith & Mackie, 2000).	Shouting drinks for group members. Drinking games that require all participants to play.
Group composition (gender mix)	Group composition can underlie some group motivation gains (Kerr & MacCoun, 1984; Kerr & Sullaway, 1983).	All male drinking groups may consume high levels of alcohol, such as in sporting teams.

Furthermore, different group or task contexts are likely to alter the relative importance of these processes (Kerr et al., 2005). For example, Weber, Wittchen and Hertel (2009) found that motivation gains due to social indispensability were more likely for women, whereas motivation gains due to social competition were more likely for men. Motivational gains are generally higher during face-to-face work, compared with anonymous work (Hertel, Niemeyer, & Clauss, 2008). However, women show higher motivation gains in anonymous conditions, compared to conditions with an acquainted partner. Men showed higher motivation gains in acquainted partner work than anonymous partner work (Weber, Wittchen, & Hertel, 2009). Each definition and its relationship with alcohol is detailed in Table 2.7.

As highlighted by Kerr and Hertel (2011), most research on the Köhler's effect has been conducted under rather artificial conditions in the scientific lab with short-term, ad hoc groups – and with rather simple tasks. Additionally, the work groups being tested are usually composed of strangers with no past or future interaction and with minimal group identification (Kerr et al., 2008). Several academics (see Haslam, 2004; Worchel, Morales, Paez, & Deschamps, 1998) have argued that such conditions mitigate against group motivation gains and that identification with one's workgroup may be an important precondition for group gains. More recent research has found that Köhler's motivational gains effect does exist in exercise groups (Kerr, Forlenza, Irwin, & Feltz, 2013).

Research by Gochel, Kerr, Seok, and Harris (2008), however, has found that group identification has no direct or moderating effects on effort. Gockel et al., (2008, p. 1320) qualified these results, stating that, "the present study did not show (nor do we maintain) that group identification is irrelevant for motivation gains." Thus, it is likely that studying groups that have formed organically – in the wild – would yield significant insights to motivational gains. Therefore, using friendship groups to investigate group motives for drinking could provide additional nuanced evidence of this effect. Additionally, there are also no theoretical reasons why the Köhler effect would be limited to motor persistence tasks (Kerr et al., 2007) and it has been found to occur in other motor and cognitive tasks (Stroebe et al., 1996). As such, Köhler's motivational gains could exist in risky drinking. Whilst the vast majority of Köhler's motivational gain studies use experiments as their main method of inquiry, this thesis will be the first use a qualitative method of inquiry, by exploring this theory in a new and unexplored context.

2.7 Framework 2: Collective Intentions

The second framework being used in this thesis is collective intentions (also known as joint, collective, social or we-intentions) which occur when the group as a whole intends to do something. This literature emanates from the field of social philosophy, as outlined in the journal of *Philosophy Studies*. Joint intentions can involve bonds of different strength between the participants. They can be bound by explicit or implicit

agreements, by public acceptance of joint plans involving joint intentions or even just by mutual beliefs about joint plans (Tuomela, 2005).

2.7.1 Definition

If the participants have made an agreement (consisting of mutual, interdependent promises) to perform X together, they accept the intention in the thick, normative sense. This can be called the full or fullest case of joint intention (Tuomela, 1995). Bratman (1997) calls this kind of intention a "collective intention" and expresses it in the form, "I intend that we act." In a somewhat similar manner, Tuomela (1995, p. 2) defines a "we-intention" as "a commitment of an individual to participate in joint action and involves an implicit or explicit agreement between the participants to engage in that joint action."

A social intention has previously been termed as a consumer's collective intention to perform a group act (Bagozzi & Dholakia, 2006). This could be expressed as, "We intend to go drinking on Friday." Here, a person plans to participate in a joint activity, but conceives of the activity, not so much as individuals performing personal acts that atomistically accumulate and contribute to a group performance, but rather as a group action where one is a member of the group (Bagozzi & Dholakia, 2006). Importantly, in formulating these social intentions, the activity (and the intention) only has meaning if the group acts in concert (Bagozzi & Dholakia, 2006). Individual action by oneself is not enough to attain one's goal in either case. For example, one person turning up to a protest defeats the purpose of the protest itself. Furthermore, groups can function together to produce a result not independently obtainable through an individual's action.

As outlined by Bagozzi and Dholakia (2006, p. 48), "when formulating a social intention, the consumer acts as an agent of, or an agent with, the group, in coordination and cooperation with its other members." Social intentions form the basis of participation in group drinking, since the actions sustaining the behaviour are by the friendship group as a whole. "Any attempt to study social action will be confronted with the choice of what group to study and whether to scrutinize group formation or ongoing group functioning" (Bagozzi, 2000, p. 393). However, it

should be acknowledged that intention does not always lead to behaviour change (Holdershaw, Gendall, & Wright, 2011).

2.7.2 Prior Research in Collective Intentions

A selection of studies conducted on collective intentions is shown in Table 2.8. The authors and year published are presented, along with their definition of collective intentions, the method used, the country where the research took place, and the focal group of interest. Many review and discussion papers are presented as they contribute to the debate around the use of collective intentions as a theory, with some authors calling for more research to be conducted using consumer groups (see Bagozzi, 2000).

Table 2.8

Literature Summary of Collective Intentions

Author(s), year	Definition	Method(s)	Countries	Group
Bagozzi, 2000	Members of a group achieve a social identity that is manifest in (1) a cognitive component made up of self-awareness of membership, (2) an affective component consisting of attachment or feelings of belongingness, and (3) an evaluative component inherent in collective self-esteem.	Review paper	*NA*	*NA*
Tomasello & Carpenter, 2007	Collaborative interactions in which participants share psychological states with one another	Review paper	*NA*	*NA*
Kozinets, Hemetsberger, & Schau, 2008	Occurs when social interactions trigger new interpretations and new discoveries that consumers thinking alone, could not have generated	Qualitative typology development	USA	Online creative consumer communities
Gilbert, 2009	People share an intention when and only when they are jointly committed to intend as a body to do such-and-such in the future	Discussion paper	*NA*	*NA*
Wang, Zhao, & Li, 2013	The value created by the group buying collective is manifest from pre-purchase information sharing, to during-purchase negotiation, to post-purchase consumption activities.	Ethnographic interviews	China	Chinese consumers who engage in group buying behaviour

As this research is focusing on midstream social marketing and the role of friendship groups, collective intentions will be examined within this specific group type. The actions of these friendship groups require that members act together, in a particular

way, in order to be termed "group behaviour." In other words, the group activity can only occur when the members are together and acting jointly – no individual can do this activity alone. To summarise, you can consume by yourself, but in order to consume in a group, you must be with those group members.

Within marketing, group intentions is a nascent field, with limited studies being conducted, most of which are conceptual pieces (see Gaur & Tiwari, 2008). Gaur and Tiwari (2008) stress that "this is really a lacuna in the field, as the power system in marketing has mostly stressed individual behaviour" (p. 139). Additionally, group behaviour in marketing has been studied sporadically. Generating dialogue has also been shown to promote collective learning and to affect collective intentions within a group, which can be precursors to changing behaviour (Chapman, MacLaurin, & Powell, 2011).

2.8 Research Questions

Based on the literature review the aim of this research will be to explore how the friendship group can affect alcohol consumption. From this aim the first research question is: RQ1 What are the friendship group-level motives for alcohol consumption? The second aim of this research will be to examine group-level motives and their relationship to alcohol consumption. Two subsequent sub-research questions were developed: RQ2a What is the relationship between friendship alcohol motives and alcohol consumption?; and: RQ2b Do friendship-group features moderate the relationship between motives and alcohol consumption?

2.9 Conclusion

In summary, Chapter 2 has outlined the gaps in the literature. Firstly, that social marketing tends to focus heavily on an individual level and should take a more midstream approach involving groups. Secondly, while individual motives for drinking have been studied extensively, group motives have yet to be investigated. Two theoretical frameworks will be used to address these gaps: Köhler's motivational gains effect and collective intentions. Furthermore, the interaction of individual and group motives has yet to be empirically examined. Subsequent

research questions were developed which address these gaps. The next section will outline the methodology needed to answer these questions.

Chapter 3 Methodology of Study 1

3.0 Methodology

This section explains the proposed research programme, focusing on philosophical assumptions, research design, research timeframe and ethical considerations. The previous chapter discussed the key literature and proposed key research questions. This chapter will outline philosophical assumptions, justify the method, discuss sample recruitment and selection and, finally, detail ethical issues and analysis strategy.

3.1 Philosophical Assumptions

Paradigms are the basic belief system or worldview that guides the researcher, not only in choices of method, but in ontological and epistemological directions (Guba & Lincoln, 1994). Bettis and Gregson (2001) believe paradigms represent the pair of glasses through which we "see" the world. That being the case, it is important to determine the paradigm in which the researcher functions. Five main paradigms exist: positivism, post-positivism, critical theory, constructivism and participatory inquiry (Guba & Lincoln, 1994; Heron & Reason, 1997).

Within this research – and marketing research in general – a post-positivist approach is often adopted (Marsden & Littler, 1996). Post-positivism holds that only partially objective accounts of the world can be produced as all methods examining such accounts are flawed (Schwandt, 1997). A limitation of the post-positivist approach is that it focuses on objective reality, as opposed to a reality that is socially constructive and subjective (Houghton, 2008). The aim of post-positivism is explanation through prediction and control (Brennan, Voros, & Brady, 2011).

Ontology is concerned with the nature of reality, and various ontological positions reflect different prescriptions of what can be real and what cannot (Willis, Jost, & Nilakanta, 2007). This thesis uses critical realism, which suggests that reality exists, but can only be imperfectly and probabilistically apprehendable (Heron & Reason, 1997). It is possible to gain knowledge of actually existing structures and generative

mechanisms, albeit not in terms of a mirror image (Denermark, 2006). This position is driven by the idea that it is impossible for humans to truly perceive the real world with their imperfect sensory and intellectual mechanisms (Cook & Campbell, 1979).

Epistemology deals with what we can know about reality and how we can know it (Willis, Jost, & Nilakanta, 2007). This thesis takes a modified objectivist approach, whereby objectivity remains an ideal, but can only be approximated, with findings being probably true (Willis, Jost, & Nilakanta, 2007). This is achieved by trying to be as neutral as possible; by "coming clean" about one's own predispositions and by relying on "critical traditions", such as peer review (Guba, 1990).

3.2 Research Design

This research seeks to explore the role the group plays in influencing consumption habits. More specifically, within the context of this research: RQ1 What are the friendship group-level motives for alcohol consumption? The qualitative method of interviews will be used to explore this issue. A quantitative model will be built, based on the qualitative stage of the research. The quantitative research question is: RQ2a What is the relationship between these friendship alcohol motives and alcohol consumption? Quantitative methods will be used to answer this question, specifically survey research, exploratory factor analysis (EFA) and multiple hierarchical regression analysis (MHRA). This research process is shown in diagram for in *Figure 3.1*. Further details can be found in Table 3.1.

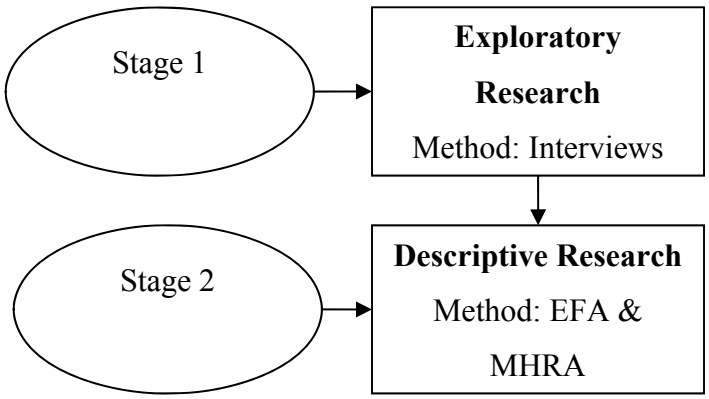


Figure 3.1. Research Process

Table 3.1

Research Design

Research questions	Method	Sample	Analysis
RQ1 What are the friendship group-level motives for alcohol consumption?	Interviews	Participants who consume alcohol, and are between the ages of 18 and 30	Thematic analysis
RQ2a What is the relationship between friendship alcohol motives and alcohol consumption? RQ2b Do friendship-group features moderate the relationship between motives and alcohol consumption?	Survey	250+ sample	Exploratory factor analysis & multiple hierarchical regression analysis

3.3 Mixed Methods Research

Both qualitative and quantitative research have their weaknesses and strengths. As outlined in Table 3.2, both research types vary considerably in their focus and philosophical roots. Quantitative research takes a realist approach, adopting a positivist stance; whereas qualitative research focuses on the nature or essence of research and uses phenomenology, symbolic interactionism and constructivism (Ritchie & Lewis, 2003). Qualitative research is flexible, evolving, emergent and descriptive and uses small, non-random, but purposeful, samples (Marriam, 2009). Quantitative research is empirical, structured, and predetermined, and uses large, random, representative samples to test hypotheses (Bernard, 2011).

Table 3.2

Characteristics of Qualitative and Quantitative Research

Point of comparison	Qualitative research	Quantitative research
Focus of research	Quality (nature, essence)	Quantity (how much, how many)
Philosophical roots	Phenomenology, symbolic interactionism, constructivism	Positivism, logical empiricism, realism
Associated phrases	Fieldwork, ethnographic, naturalistic, grounded,	Experimental, empirical, statistical

Point of comparison	Qualitative research	Quantitative research
	constructivist	
Goal of investigation	Understanding, description, discovery, meaning, hypothesis, generating	Prediction, control, description, confirmation, hypothesis testing
Design characteristics	Flexible, evolving, emergent	Predetermined, structured
Sample	Small, non-random, purposeful, theoretical	Large, random, representative
Data collection	Research as primary instruments, interviews, observations, documents	Inanimate instruments (scales, tests, surveys, questionnaires, computers)
Primary mode of analysis	Inductive, constant, comparative method	Deductive, statistical
Findings	Comprehensive, holistic, expansive, richly descriptive	Precise, numerical

Adapted from: Marriam, 2000, p. 18

A number of different types of mixed methods can be used for mixed method research, as outlined by Table 3.3. These different types are distinguished by their sequence of qualitative and quantitative methods and the weight they give to each types of method.

Table 3.3

Mixed Method Types

Design type	Reason for mixed method design	Notation
Convergent	To bring together the strengths of both quantitative and qualitative research to compare results or to validate, confirm, or corroborate quantitative findings with qualitative findings.	QUAN + QUAL
Embedded	There are different questions requiring different data.	QUAN(qual)
Explanatory	Qualitative data are needed to help explain or build on initial quantitative results.	QUAN → qual
Exploratory	Qualitative data is only an initial exploration to identify variables, constructs, taxonomies, or instruments for quantitative studies.	qual → QUAN
Transformative	The researcher shapes within a transformative theoretical framework (e.g. feminism, queer theory, critical race theory). All other decisions (interaction, priority, timing, and mixing) are made within the context of the transformative framework.	*Any combination of the notations*
Multiphase	Combines both sequential and concurrent	*Multiple*

Design type	Reason for mixed method design	Notation
	strands over a period of time that the researcher implements within a program of study addressing an overall program objective. Often used in program evaluation.	*notations, for example:* qual → Quan → QUAN + QUAL

Adapted from: Creswell & Clark (2007, 2011)

For instance, convergent mixed method design uses quantitative and qualitative research equally and at the same time (de Meij, van der Wal, van Mechelen, & Chinapaw, 2013). A study programme might use convergent mixed methods to assess high schoolers' attitudes towards alcohol use. An embedded design occurs when the researcher collects and analyses both quantitative and qualitative data within a traditional quantitative or qualitative design; the supplement strand is added to enhance the overall design in some way (Palinkas et al., 2011). Explanatory design uses qualitative research to help explain initial quantitative results (Carr, 2009). For example, a researcher might find a result in the quantitative data that can only be explained by conducting qualitative research.

Exploratory design uses qualitative research only as an initial exploration to identify variables, constructs, taxonomies, or instruments for quantitative studies (Cabrera, 2011). For instance, a researcher could have come up with some categories in the qualitative stage and has a desire to test and measure these categories as variables in a quantitative model. Transformative design can use any other type of mixed method design but at all stages incorporates a transformative theoretical framework, such as feminism or queer theory (Parmelee, Perkins, & Sayre, 2007). For example, a researcher might use queer theory to examine alcohol consumption in an all-male group and determine if homophobic tendencies promote heavy consumption. Multiphase mixed methods combine both sequential and concurrent strands over a period of time that the researcher implements within a program of study addressing an overall program objective (De Lisle, 2013). This approach is often used to evaluate specific programmes, such as an alcohol intervention study.

By adopting a mixed methods approach this thesis used qualitative interviews and quantitative frequentist statistics to answer the research questions. This approach is an exploratory mixed methods design (Creswell & Clark, 2011). A combination of

both forms of qualitative and quantitative data provides the most complete analysis of problems (Creswell & Clark, 2007). In addition, this approach allows researchers to situate numbers in the contexts and words of participants, and they can frame the words of participants with numbers, trends, and statistical results (Creswell & Clark, 2007).

This research will use the qualitative approach first to uncover the meanings surrounding alcohol consumption and extend the previous theoretical models, which have been quantitative and experimental in nature. The previous literature on motivational gains has also focused on using strangers in a lab setting, whereas these interviews will focus on the friendship group with people who know each other, adapting the theory to a new context.

3.4 Study 1 – Justification for Interview Method

This section will outline the development of the interview discussion guide; the sampling procedure; the ethical implications; the research setting; the process; how the data will be collected, recorded, managed and analysed; as well as detailing the coding schedule for the research.

Interviews have been chosen as the means to explore the topic, because they help to refine research issues and build certainty around the topic (King, 1996). Understanding the participant's point of view will help to create an understanding of their friendship group's behaviours, as well as underlying motives for their actions. Interviews aim to go below the surface of the topic being discussed, explore what people say in as much detail as possible, and uncover new areas or ideas that were not anticipated at the outset of the research (Britten, 1995). They allow flexibility in information collection, ease in communication and ease in obtaining personal information, once rapport has been established (Gupta, 2003).

There are three main types of interviews, as shown in Table 3.4. These are: structured, semi-structured, and unstructured. Structured interviews use the same standard questions for every interview with no probing (Patton, 2002). Unstructured interviews start the conversation with a broad/holistic question and with no

predetermined set of questions, leading to a conversational and informal interview style (Crabtree & Miller, 1999). Semi-structured interviews use some structured questions between participants but these questions can change and be adapted to the respondent (Corbin & Strauss, 2014). The use of probing and prompts to allow the participant to elucidate further is standard practice in this type of interviewing.

Table 3.4

Types of Interviews

Types	Definition	Probe	Question change
Structured	The same standard questions are used for every interview with no probing	×	×
Unstructured	The interviewer starts the conversation with a broad/holistic question with no predetermined set of questions	✓	✓
Semi-structured	Questions are open ended and probing is used to prompt the respondent to elucidate further where necessary. Participants are free to add anything else to the interview they might feel is relevant to the discussion	✓	✓

Adapted from: Patton, 2002; Crabtree & Miller, 1999; Corbin & Strauss, 2014

A weakness within focus groups is that other respondents present may influence each other's opinions and bias viewpoints (Parasuraman, Grewal, & Krishnan, 2007). Focus groups require an excessive reliance on the skills of the moderator. Additionally, the wrong combination of people can result in no tangible output (Gupta, 2003). Focus groups can create an impersonal feeling, making honest conversation unlikely. Moreover, the moderator themselves may contribute to bias or a dominating participant may sway the opinion of others (McDaniel & Gates, 1998). In addition, participants may respond in ways designed to please others and participants are also unlikely to diverge too far from the group consensus (Wilkinson & Birmingham, 2003).

An interview topic guide enabled the interviewer to explore each participants' experiences with alcohol, as well as examine the role of their friendship group. This interview guide can be found in Appendix B – Interview Topic Guide. Questions

included: “Why does the group drink?” and “Do you think there are any alternatives to going out drinking? If so what are they?” Introductory questions were used as ice breakers. These questions were general and easy to answer, allowing the participants to reply with as much as information as they wanted, this promoted rapport to be established (Segal & Hersen, 2009). These included questions such as: “How did your friendship group form?”, “How often does the group catch up?” and “What types of activities do you do together?” Questions regarding risky drinking were also asked, specifically: “What’s the difference between moderate and risky drinking?” This allowed the researcher and participants to reach mutual agreement on what the term risky drinking actually means and, thus, the rest of the research questions could be frame within this context. Questions relating to the study’s research questions were then developed and all the questions were pilot-tested with academic professionals to ensure appropriateness and relevance.

The interview questions were developed from the theories that were examined in the literature review. By using rapport building, questions, followed by theory-driven questions, and by providing the opportunity for the participant to develop and explain their behaviour and that of their friendship group, more questions were developed.

The interview guide was tested on academics and a person who fits the target audience selected for interviewing. As a result, four changes were made: 1) questions on perceptions of risky drinking definition were added; 2) small grammatical errors were identified and changed; 3) question order was changed to place general questions about alcohol consumption first to focus the respondent on their personal drinking behaviour prior to questions on motives; and 4) within the alcohol consumption scale the six questions relating to amount consumed were ordered from *most* to *least* as pre-test respondents indicated this reduced social judgement and increased acceptability of the volume. Overall, this pre-testing process helped to improve the interview instrument.

Even the most ordinary and innocuous questions are susceptible to social desirability bias (Nargundkar, 2008), which is where the respondent will give socially desirable responses, rather than telling the truth (Mitchell & Jolley, 2010). Using examples of other people’s similar behaviour can help normalise the behaviours, which can

reduce social desirability responding (Smith & Albaum, 2004). For instance, the following might be used: "I had a friend who drinks three times a week, too." Additionally, the disclosure of some personal stories should make the informants feel more at ease (Rapley, 2004). Finally, the participant was told that there is no right or wrong answer to the question, and they were assured of confidentiality and their anonymity, to help minimise bias, as far as was practical (Nancarrow & Brace, 2000). The interview questions were developed from prior research, in particular Köhler's motivational gain effects theory (Kerr et al., 2008) and collective intentions (Tuomela, 2005), with details shown in Table 3.5.

Table 3.5

Interview Question Development

Theory used to develop questions	**Interview questions**
Collective Intentions (Tuomela, 2005)	5. Run me through a general night out when everyone's drinking? a. Why a particular place? 6. How does the group know it has had a good night out? 7. Why does the group drink? 8. Why not some other activity? 9. How does belonging in your friendship group encourage people in the group to drink more or less alcohol? *Probe for examples of group decision making*
Köhler's motivational gain effects theory (Kerr et al., 2008)	10. Are people trying to compete with one another? a. Are people trying to see who can drink the most? *Probe for examples (How? Where? Certain locations with certain people only?)* 11. How does drinking change when the group changes? a. What about if the group changes size? Increases or decreases. 12. If the male female ratio changes does the level of drinking change? If it's an all-male group versus half males and half females? 13. How does the group perceive others if they are not drinking alcohol when everyone else is? 14. How does the group perceive others if someone has drunk alcohol to excess? 15. When the group goes out drinking is everyone usually expected to be drinking? 16. Do group members buy drinks for each other or have rounds? a. Is this always done or just for special events like someone's birthday?

Theory used to develop questions	Interview questions
	b. Does this increase the total amount you drink? 17. Are there opportunities not to drink? 18. How would other members of the group encourage (put pressure on) you to drink? 19. Does the group play drinking games? a. What kinds of drinking games are played? *Probe for explanations about game and motives for playing*

3.5 Sampling Recruitment and Selection

Qualitative sampling is generally referred to as involving either *theoretical* (Mays & Pope, 1995) or *purposive* (Kuzel, 1992) sampling. The purpose is not to establish a random or representative sample drawn from a population (normally associated with quantitative research methods), but rather to identify specific people who either do, or do not, possess characteristics relevant to the social phenomenon being studied (Mays & Pope, 1995). This research will target 18- to 30-year-olds who either consume alcohol or previously used to consume too much alcohol. This age range marks an important time in a young adult's life, "characterised by rapid psychological and physical transition" (ABS, 2008). Eighteen is the legal drinking age in Australia; new friendships are formed as adolescents and young adults transition into university or work; more independence is granted; and peer relationships pose a greater influence on risk-taking behaviour (Sorhaindo, 2007). This age group also engages in binge drinking more often than other age groups (Kubacki, Siemieniako, & Rundle-Thiele, 2011). Care will be taken to include a diverse collection of people to ensure all points of view are included. This will involve sampling until theoretical saturation has been reached. Participants will be gathered through personal contacts, social networks, university classrooms, and a social blogging site called Hello Sunday Morning (HSM). HSM is a blogging site dedicated to sharing people's personal stories about their choice to give up alcohol. HSM users indicated that they have been heavy drinkers in the past and peer pressure was a factor in their consumption of alcohol; as such, their views on group motives for drinking yield a more diverse perspective compared with participants who are lighter drinkers.

3.6 Ethics

Ethical clearance was obtained, under university guidelines, with the QUT Business School's Low Risk Ethics Application Review Process. The application met the requirements of the National Statement on Ethical Conduct of Research Involving Humans and was approved. All interview participants were notified that their participation was voluntary and that they would be compensated for their time. Pseudonyms were used when participants were referred to in the text and names of any friends or places mentioned were changed to protect anonymity. Participants were also provided with contact details for counselling services and Alcoholics Anonymous if they wanted to seek help. The ethical clearance number for this research was 1100000975. Informed consent sheets are shown in Appendix D.

3.7 Research Setting

In terms of research setting, it is acknowledged that a neutral or ideal location is illusory (Kitzinger & Barbour, 1999). However, Bloor, Frankland, Thomas, and Robson (2001) warn that a pub would not be an advisable location if one was seeking to recruit participants with alcohol problems. As this research has the potential to uncover participants with alcohol problems, a bar setting will not be used for the interview. Importantly, rather than being viewed as a limitation in interview research, building a variety of settings into the research design can strengthen its comparative potential, with the differences which arise from this strategy becoming a resource in analysis (Arksey & Knight, 1999; Babour, 2007). As such, this research will use a variety of settings in which to conduct the interviews. Home interviews have the advantage of allowing for visual confirmation through body language and pictures or images can also be shown to garner insight (Opdenakker, 2006). University settings are convenient for the interviewee and help the interviewer to reach a larger number of participants.

Semi-structured interviews can be conducted using a variety of channels such as face-to-face, telephone, and even using online communication such as chat rooms and messaging (Holstein & Gubrium, 2004). For this research, face-to-face and telephone interviews were used, using identical question to prompt the responses.

Telephone interviews have the advantage of being more flexible and faster than face-to-face interviews and, because respondents have more privacy and confidentially, and are also more likely to answer questions honestly. Finally, telephone interviews allow participants who are in geographically isolated areas to be contacted (Neelankavil, 2007). This will also allow diversity in the sample, as participants who are in different states will have been exposed to different state laws regarding alcohol consumption, such as lock outs, issues regarding the serving of minors and BYO provisions (see *Liquor Act 2007* (NSW), *Liquor Licensing Act 1997* (SA), *Liquor Control Reform Act 1998* (VIC), *Liquor Control Act 1988* (WA)).

3.8 Recording and Managing Data

Data should be recorded in a systematic manner that is appropriate for both the setting and participants and that will facilitate analysis (Sim, 1998). In this case, a dictaphone was used to record the participant's speech. This allowed the facilitator to control the discussion more, as relying solely on note-taking can be rather cumbersome (Guest, Bunce, & Johnson, 2006). Participants of the interview were informed of this recording method via the ethics participant information sheet and explicit verbal notification; informed consent was obtained by having participants sign a consent form. Audio recordings were labelled at the beginning of each interview and extra batteries were present. These steps ensured the data was intact, complete, organised and accessible.

3.9 Organisation

This stage marked the beginning of the more focused period of the analysis. As such, the researcher spent time organising the data. This involved listing data that had been gathered, performing minor editing and a general, overall clean-up. The researcher logged the types of data according to dates, names, times and places, in addition to where, when and from whom they were gathered. Table 3.6 shows a preliminary example of this process.

Table 3.6

Data Log

Date	Place	Activity	Who	What
11/08/11	Location	Interview	People involved	Research question

The transcription process involved converting interview recordings to produce a neat, typed copy (Gibbs, 2007). Mays (1995) warn that transcription involves a change of medium that introduces issues of accuracy, fidelity and interpretation. Other dangers include superficial coding, decontextualisation, missing what came before and after the respondent's account, and missing what the larger conversation was about (Gibbs, 2007; Kvale, 2007). In order to overcome these problems, I went back to the recoding to check interpretations, based on the transcription. Although some authors suggest only transcribing some parts, deciding which parts need transcribing can be a very difficult process and could lead to a loss of context making it harder to interpret what the respondents really mean (Gregory, Russell, & Phillips, 1997). All of the interview recordings were transcribed. Anonymisation of participants was guaranteed by giving respondents pseudonyms, ensuring their confidentiality.

The level of transcription is also an important issue. This refers to the degree to which the sound recording is captured when transcribed (Gibbs, 2007). For example, should abbreviation, verbal tics, pauses, repetition or accents be recorded? As this study is interested in the factual content of what is said, rather than the details of expression and language use, small grammatical errors were tidied up. As suggested by Arksey and Knight (1999), abbreviations were be spelled out, verbal tics (such as "or", "um" and "erm") were ignored, but others (such as "like", "y'know" and "sort-of") were retained. Pauses were cut where deemed irrelevant, but retained and indicated by three dots (...) if it improved interpretation. Lastly, repetitions were rendered into their original meaning, where appropriate.

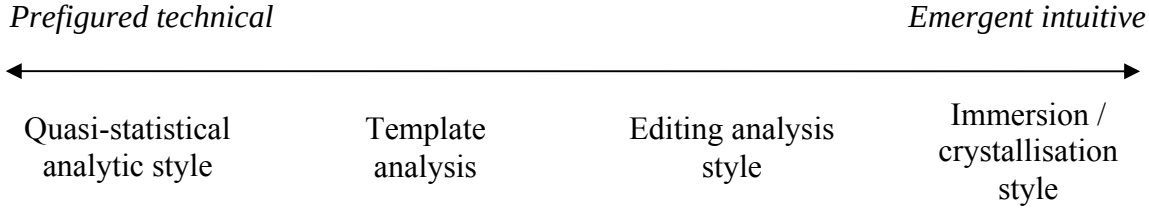
Ensuring accuracy in the transcript is vital. As suggested by Gibbs (2007), typing errors and misspellings should be picked up by, for example, Microsoft Word, and checking the transcripts against the original recording also helps to find any misheard words. One of the advantages of the researcher doing their own transcription is that they are familiar with the context and subject matter and also familiar with the

accent, cadence and rhythm of the speaker, making transcriptions and subsequent analysis easier. An example of a transcription can be seen in Appendix C – Transcription Sample.

3.10 Data Analysis Strategy

"The process of bringing order, structure, and interpretation to a mess of collected data is messy, ambiguous, time-consuming, creative and fascinating" (Marshall & Rossman, 2006, p. 154). Qualitative data analysis is a search for general statements about relationships and underlying themes (Strauss & Corbin, 1997). A balance must be attained between efficiency and design flexibility, as a tightly structured, highly organised data-gathering and data-analysing scheme can be important for focusing activities for study, but can often filter out the unusual and serendipitous (Marshall & Rossman, 2006).

A continuum of ideal-type analysis strategies is offered by Miller & Crabtree (1992) (see *Figure 3.2*). The prefigured technical end of the continuum offers technically-scientific and standardised strategies in which a researcher has assumed an objectivist stance, relative to the study, and has designed the categories in advance (Marshall & Rossman, 2006). On the other end of the continuum are the emerging, intuitive strategies, in which no categories are predetermined and researchers rely heavily on interpretative and intuitive capabilities. "Template" and "editing" analysis strategies are housed closer to the centre of the continuum, with template processes more prefigured and stipulated than the editing processes (Crabtree & Miller, 1992).



Adapted from Crabtree & Miller, 1992, p.19-20

Figure 3.2. Continuum of Analysis Strategies

Given that this research adopts a post-positivist stance, a middle ground approach is taken, whereby some aspects of template analysis and editing analysis are used (Spiggle, 1994). Indeed, Marshall and Rossman (2006) comment that the researcher is guided by initial concepts and developing understandings that shift or modify as the data is collected and analysed. The general research question will help to focus the research and keep it on task. It is repeated here: What are the friendship group-level motives for alcohol consumption?

The steps in this qualitative data analysis process are as follows: immersion in the data to gain deep insights into the phenomena; development of a coding system; and linking codes to form overarching categories or themes (Morse & Richards, 2002).

Immersion

Careful attention will be paid so as not to impose a "world of meaning on the participants" (Patton, 2002, p.459) through thorough questioning of the data and reflecting on the conceptual framework. Reading and re-reading through the data multiple times forces the researcher to become intimately familiar with that data and inevitably generates new ideas about the data (Gibbs, 2007; Marshall & Rossman, 2006).

Coding

Coding data is the formal representation of analytic thinking (Marshall & Rossman, 2006). It is the basic analytic process engaged in by a researcher (Strauss & Corbin, 1990). A code in qualitative inquiry is most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing and/or evocative attribute for a portion of language-based or visual data (Saldana, 2009). When reflecting on a passage of data to decipher its core meaning, we are *decoding*; when we determine it is appropriate and label it, we are *encoding* (Saldana, 2009). This whole process, however, is usually just referred to as coding.

Coding is a method that enables the researcher to organise and group similarly-coded data into categories because they share some characteristic (Thomas, 2006). This process permits data to be segregated, grouped, regrouped, and relinked, in order to consolidate meaning and explanation (Grbich, 2007). Classification reasoning and

tacit and intuitive sense are used to determine which data "look alike" and "feel alike", when grouping them together (Lincoln & Guba, 1985, p. 347). Essentially, similar codes are grouped together into categories. For instance, within this research, counting, comparing, and verbally encouraging are grouped into the categories of explicit competition. From these categories, concepts or themes are built; from these concepts and themes, theory can be conceptualised (Baxter, Killoran, & Goyer, 2010).

This research will use an integrated approach to code development that employs both inductive (or ground-up) development of codes and a deductive organising framework (Pratt, 2009). This method of qualitative data analysis has been outlined by Bradley, Curry, & Devers (2007) as both rigorous and appropriate for understanding phenomena within their context, uncovering links among concepts and behaviours, and generating and refining theory. Definitions of each code will be recorded on a filing card to ensure the code is applied in a consistent way. This card will include the name of the code, the date when coding was done or changed, a definition of the code, and ideas about how it relates to other codes or how it might actually be split between two codes (Gibbs, 2007).

Categories and themes

Generating categories and themes is an analytic process that demands a heightened awareness of the data – and a focused attention to that data – and openness to subtle, tacit undercurrents of social life (Marshall & Rossman, 2006). It moves beyond mere description to more categorised analytic and theoretical levels (Gibbs, 2007). As categories of meaning emerge, the researcher searches for those that have internal convergence and external divergence (Guba, 1987). In other words, categories should be internally consistent, but distinctive from each other (Leech & Onwuegbuzie, 2007). Caution will be used as categories should not be exhaustive and mutually exclusive, but should instead identify the salient, grounded categories of meaning held by respondents (Rossman & Marshall, 2006). These categories will be taken from the literature and previous research, but will also be generated by reading through transcripts. Of course, the list of categories will likely be amended during analysis, as new ideas and new ways of categorising are detected in the text (Ritchie, Spencer, & O'Connor, 2003). Some categories taken from the literature are social

comparison and conjunctive task, which form part of Köhler's motivational gain effects.

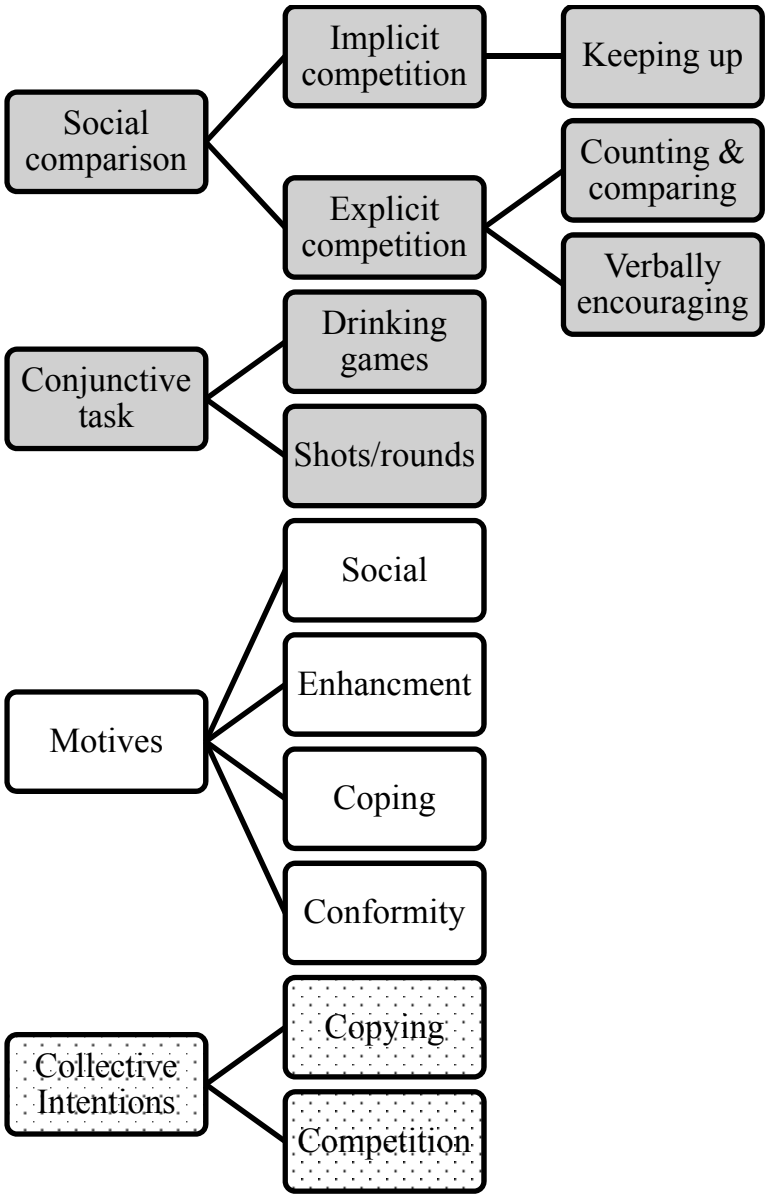


Figure 3.3. List of some A Priori Codes, Categories and Themes

There were four super-ordinate level categories (see *Figure 3.3*): two from Kohler's motivation gain (*social comparison* and *conjunctive task*), one from alcohol literature (*motives*), and one from the shared cognition literature (*collective intentions*). There were 10 at the basic level: two from social comparison termed *implicit competition* and *explicit competition*; two from conjunctive task, termed *drinking games* and *shots/rounds*; four from motives, termed *social*, *enhancement*, *copying*, and *conformity*; and lastly, collective intentions had two basic-level categories: *copying* and *competition*. There were three categories at the sub-ordinate level: *keeping up*

from implicit competition, and *counting and comparing* and *verbally encouraging* from explicit competition.

3.11 Method Limitations

As with all research, there are a number of limitations that must be discussed. Firstly, data was collected in a cross-sectional manner, which makes causal relations harder to justify and provide evidence for (Weerasekera, 2013). Results cannot be generalised to larger populations, due to the non-random collection of participants (Boyce & Neale, 2006). Sampling bias can result in a description of the phenomenon or theory development that is diminished and not representative of the complexity of the experience (Hamilton & Bowers, 2006). Bias, then, is not so much a concern in terms of the samples differing significantly from the population but rather in the samples not providing an in-depth description of the phenomenon under study (Hamilton & Bowers, 2006). To limit this potential bias, people were interviewed until saturation occurred, or the point where no new information was obtained (Morse & Field, 1995). Response bias, commonly called nonresponse bias, is the bias that presents itself in research where those who selected to be in the study and those who did not select to be in the study have significant differences in regards to multiple responses. One way qualitative researchers control error is to build in measures in their selection and interviewing procedures similar to those used by their quantitative colleagues (Roller, 2011). As such, for this research, respondent incentives were used; and the imposed response burden was limited by having the respondents choose when and where they wanted to be interviewed.

3.12 Summary

This section has outlined the interview process for the qualitative stage of the research. The rationale for using interviews was discussed, as was the sampling procedure, which targeted young adults who consume alcohol. The ethical implications were outlined with participant protections put in place. The interview process itself was mentioned, as was the data management process and the data analysis strategy which discussed data organisation, immersion and the coding process.

Chapter 4 Results and Analysis of the Qualitative Study

4.0 Introduction

Chapter 3 discussed the methodology for Study 1. This section will introduce the findings from 19 interviews, and present data logs and interviewee descriptive data, followed by the exploration of the major themes within the data, using thematic analysis. While we know about the effect of individual-level motives, we do not know the effect of group-level motives. Thus, the aim of this section is to answer the first research question: What are the friendship group–level motives for alcohol consumption?

4.1 Data Log

The data log for the interviews is shown in Table 4.1. It documents when, where, with whom, and in what format the interviews were conducted, as well as details about length and recruitment.

Table 4.1

Data log of Interview Participants

Interview	Date	Who*	Place	Format	Length (mins)	Recruitment
1	19/08/2011	*Tom*	*Interviewee's residence*	*Face-to-face*	30	Social contact
2	6/09/2011	*Edward*	*Interviewer's residence*	*Face-to-face*	50	Social contact
3	10/09/2011	*John*	*John's residence*	*Face-to-face*	28	Social contact
4	5/10/2011	*Dave*	*Park in the city*	*Face-to-face*	23	Social contact
5	17/10/2011	*Mark*	*Food court in the city*	*Face-to-face*	26	Social contact
6	19/10/2011	*Kate*	*University room*	*Face-to-face*	25	University
7	6/10/2011	*Amy*	*University room*	*Face-to-face*	20	Social contact
8	8/11/2011	*Jo*	*University room*	*Face-to-face*	17	University
9	8/11/2011	*Tiff*	*University room*	*Face-to-face*	19	University
10	4/12/2012	*Teddy*	*Interviewee's residence*	*Face-to-face*	17	Social contact
11	16/01/2012	*Steph*	*Interstate*	*Phone*	43	HSM
12	27/01/2012	*Alan*	*Interstate*	*Phone*	22	HSM
13	20/01/2012	*Alexi*	*Interstate*	*Phone*	33	HSM
14	20/01/2012	*Alandra*	*Interstate*	*Phone*	34	HSM
15	28/01/2012	*Kelly*	*Interstate*	*Phone*	41	HSM
16	1/03/2012	*Berry*	*University room*	*Face-to-face*	55	Social contact
17	2/02/2012	*Tanya*	*University room*	*Face-to-face*	37	Social contact
18	3/02/2012	*Ellen*	*University room*	*Face-to-face*	30	Social contact
19	3/02/2012	*Abby*	*Abby's residence*	*Face-to-face*	35	Social contact

Note: *pseudonyms

Nineteen interviews were conducted, ranging in length from 17 to 55 minutes, representing an average length of 31 minutes. As shown in Table 4.1, a variety of places were utilised, ranging from the interviewer's home to the interviewee's residence, as well as a variety of quiet places in the city, such as food courts (after hours) or parks. The majority of interviews were conducted in face-to-face format; five were conducted over the phone, where the participants were living in another state. In terms of recruitment, social contacts were mostly used. Three university students were also recruited and five people from the alcohol-free social blogging website Hello Sunday Morning (HSM) participated in this study.

4.2 Descriptive Features of Interviewees

As outlined by the sampling strategy, young adults were targeted for recruitment. A variety of sources were used to gather respondents and the aim was to maximise diversity. Participants' characteristics are shown in Table 4.2.

Table 4.2

Participant Characteristics

Name	Age	Gender	Study	Work	Income	Education
John	21	Male	PT	FT	$30,000	University Undergraduate
Alan	21	Male	FT	FT	$70,000	Secondary High school
Tom	22	Male	FT	FT	$40,000	University Undergraduate
Edward	22	Male	N	FT	$63,000	University Undergraduate
Mark	22	Male	FT	PT	$20,000	University Undergraduate
Kate	22	Female	FT	PT	$35,000	University Undergraduate
Jo	22	Female	FT	PT	$500	University Undergraduate
Ellen	23	Female	FT	PT	$45,000	University Postgraduate
Dave	23	Male	FT	PT	$23,000	University Postgraduate
Kelly	23	Female	PT	PT	$34,000	University Undergraduate
Tiff	24	Female	FT	PT	$27,000	Secondary High school
Berry	24	Female	PT	PT	$70,000	University Undergraduate
Amy	25	Female	FT	FT	$50,000	University Postgraduate
Tanya	26	Female	PT	N	$34,000	University Undergraduate
Alexi	28	Female	PT	FT	$70,000	University Postgraduate
Steph	29	Female	PT	FT	$100,000	TAFE
Alandra	29	Female	N	FT	$45,000	University Undergraduate
Abby	29	Female	N	FT	$65,000	University Postgraduate
Teddy	30	Male	N	FT	$80,000	University Undergraduate
Averages/ Counts	**24**	**Male: 7 Female: 12**	**FT: 47% (9) PT: 32% (6) N: 21% (4)**	**FT: 53% (10) PT: 42% (8) N: 5% (1)**	**$47,447**	**SHS:** 2 **TAFE:** 1 **Undergrad:** 11 **Postgrad:** 3

Note: FT = Full time; PT = Part time; N = not working/studying

A variety of young adults were interviewed, ranging in age from 18-year-olds (who can now consume legally) to 30-year-olds, who had mortgages and major career responsibilities. More females than males were interviewed, with eight males and 12 females. As expected with young adults, many were studying either full-time (FT) or part-time (PT). Almost all interviewees were working, with incomes ranging from $500 to $100,000 per year. In terms of education levels, many had completed – or were completing – a university degree. A student sample was selected owing to the heavy drinking rates among this group (Brache & Stockwell, 2011). Many government programmes in Western countries recognise this is an important group to target when aiming to reduce overall alcohol consumption for a population. For instance, the government of the United States of America funds the National Institute on Alcohol Abuse and Alcoholism (NIAAA), which has a budget of US$460 million; a portion of this is used specifically for college campus interventions (NIAAA, 2014). Drinking behaviours were also recorded, both in terms of yearly alcohol consumption and risky drinking sessions as shown in Table 4.3.

Table 4.3

Alcohol Consumption

Name	Yearly drinking	Risky drinking sessions (2009 guidelines)
Alan	1518	114
Kelly	1404	205
Alexi	1158	159
Kate	882	136
Dave	861	90
Alandra	755	121
Teddy	660	120
John	576	105
Steph	489	50
Tom	456	67
Mark	421	41
Edward	286	29
Amy	103	19
Tanya	88	11
Tiff	82	11
Berry	19	1
Jo	14	0
Average	**575**	**75**
Male average	**683**	**81**
Female average	**499**	**71**

Yearly alcohol consumption was calculated based on the graduated frequency approach (Gmel, Graham, Kuendig, & Kuntsche, 2006). New guidelines put forth by

the National Health and Medical Research Council (NHMRC) recommend that: "for healthy men and women, drinking no more than four standard drinks on a single occasion reduces the risk of alcohol-related injury arising from that occasion" (NHMRC, 2009, p. 51). These guidelines were also included. The female average for risky drinking sessions was also higher than the male average, even when using the new definition of four standard drinks (regardless of gender). Although not a representative sample, this data does align with the trend of increased female drinking in society (Sifferlin, 2013).

4.3 Review of Research Questions

The main aim of these interviews was to explore the role of friendship-group influence on alcohol consumption. The main research question was developed from this premise:

What are the friendship group-level motives for alcohol consumption?

4.4 Interpreting Levels of Alcohol Consumption

As risky drinking is the outcome variable, this chapter starts with consumer interpretations of risky drinking. Although there are official guidelines quantifying and defining what risky drinking is, these definitions are rarely salient in the minds of consumers (White et al., 2005). In order to frame the research questions correctly, participants were asked to define and determine the difference between risky and moderate drinking. Australia's peak body for supporting health and medical research, the NHMRC, defines risky drinking, for healthy men and women, as drinking no more than four standard drinks on a single occasion (NHMRC, 2009). This section examines the responses from participants when discussing the differences between risky drinking and moderate drinking. Specifically, they were asked, "What would you say the difference between moderate and risky drinking is?" By analysing the respondent's point of view, a more customer-oriented viewpoint can be identified. Both qualitative and quantitative interpretations of risky drinking were reported by participants. A number of different aspects emerged from the data when examining

people's views on the differences between risky drinking and moderate drinking. These include quantifying amounts, 4 qualifying experiences, degrees of control, physical effects and outcomes, location of consumption and timing. Each will now be detailed, in turn.

In Control vs Out of Control

Being in control was associated with moderate drinking, whereas being out of control or losing control was associated with risky drinking. This was a major theme within the data, as many participants mentioned it.

> *"(Moderate drinking is) drinking normally without losing yourself and your self-control. Risk drinking is when you start losing yourself and doing things that you don't normally do"* (**Nicole, 26**).
>
> *"Moderate is where you are in control. Risky is when you're losing control"* (**Alan, 21**).
>
> *"Not getting to that silly stage of not being coherent, or not being, not knowing about your environment and your surrounds. Moving beyond the point of being able to recognise people and your surroundings, and basically getting to that silly stage"* (**Amy, 25**).
>
> *"Where you're drunk but still have control over yourself, between tipsy and drunk probably. Drinking past the point where you've lost control of yourself"* (**Mark, 22**).
>
> *"Where I just kind of lose a bit of control"* (**Dave, 23**).
>
> *"When you're still in control of your actions, you probably are a little bit on the more causal side as far as you might do things you wouldn't normally do, but you're still very much aware you're not going to wake up the next day and you're like, what the hell did I do last night? You still, I guess, retain a degree of appropriateness"* (**Kate, 22**).

Based on responses, control means "having the ability to determine and manage one's actions without undue influence" (undue influence being the degree of intoxication). Although the number of drinks might start off at zero and increase proportionally to time, the perception of control may remain stable until a tipping point is reached and loss of control takes over. Thus, alcohol may already be doing

harm biologically, before the participant feels the effects. This has important implications in terms of making participants aware of the risks of alcohol, in that the damage may already be done before 65 its effects are felt. Losing control is also a common theme in other research. When talking about participants, there was "a significant minority who thought that it was fun to lose control" (Engineer, Phillips, Julian, & Jonathan, 2003, p. 64).

Feeling Tipsy vs Feeling Drunk

The physical effects of alcohol, such as feeling tipsy versus feeling drunk were also discussed as potential differences between moderate and risky drinking.

> *"Moderate drinking would be... between tipsy and drunk"* (**Mark, 22**).
>
> *"I'll be at a moderate state when you're a bit buzzed, you're happy to go with the flow, but you're still able to think some things through"* (**John, 21**).

Tipsy was a state that occurred before becoming drunk, from Mark's point of view. John used the word "buzzed" to describe a moderate state; where you are happy, but still in control.

Private vs Public

The location of alcohol consumption was also mentioned as an important factor in determining whether drinking was risky or not.

> *"If you're at home it's less risky, it's more moderate because there's not a chance of a stranger taking you or attacking you. Stumbling up the road. Whereas risky drinking would be drinking in public"* (**Mark, 22**).

Drinking in public areas was seen as more risky than drinking in your own home, with the potential for negative consequences more likely to occur in public settings. Walking home alone was also flagged by previous research as a consequence of risky drinking (Coleman & Cater, 2005).

Small Amounts vs Large Amounts

Drinking large amounts was seen as risky drinking versus drinking small amounts.

Compared with the standard definition of risky drinking (more than four standard drinks), participants vastly overestimated what risky drinking was. As shown in Table 4.4, the average number of standard drinks that respondents considered risky drinking was 10.

Table 4.4

Quantifying risky and moderate drinking

Respondent	Moderate drinking	Risky drinking
John	-	14
Dave	-	10
Mark	2 to 3 drinks	5
Kate	-	10
Amy	-	15 drinks for a male, 10 for a female
Median	**2.5**	**11**

Time frame of drinking

Drinking over long periods of time or drinking large amounts in a short amount of time was associated with risky drinking.

> *"Risky drinking would be those people who are in the university bar ... for hours on end"* (**Tom, 23**).
>
> *"It all depend on the time-space that you're drinking them. Do three absinthe shots and within an hour you're at the pass-out stage. But do three absinthe shots over a night and I'll be at a moderate stage"* (**John, 21**).

Table 4.5

Factors Distinguishing Alcohol Consumption

Factors	Moderate	Risky
Control	In control	Out of control
Physical effects	Feeling tipsy	Feeling drunk
Location	Private home	Public outside
Timeframe	Short period with small amount of drinks, taking your time	Over a long period, drinking a lot in a short period of time
Amount	2-3 standard drinks, a few	5-15 standard drinks, a lot

Implications

Control, physical effects, location, amount consumed and timeframe were factors that participants used to determine whether their alcohol consumption was risky or

moderate, as detailed in Table 4.5. Moderate drinking meant being in control of one's actions, feeling tipsy but not drunk, drinking in private places and drinking a small amount. Risky drinking meant being out of control, feeling drunk, drinking outside in public, drinking a lot over a longer period of time, and having between 5 and 15 standard drinks. When asked to quantify risky and moderate drinking, the majority of participants vastly overestimated what risky drinking was. By taking this customer-centric point of view, it can be seen that respondents used different methods in determining risky drinking, compared to official drinking guidelines. They define risky as actions and quantities that put them at risk of harm, while moderate is the opposite.

4.5 Friendship Groups

Most participants had a number of different groups that they drank with, as detailed in Table 4.7. The frequency of drinking and location also differed within these groups. The main groups were high school friends, friends from university that were enrolled in the same subjects, university friends not enrolled in the same subjects, and the work group. For instance, Edward has four main friendship groups and drinks with them at different time periods, as shown in Table 4.6.

Table 4.6

Edward's Drinking Groups

Group	When	Where
Work friends	Every 3 months	Yacht club
High school friends	Every 6 months	Home
Uni course friends	Every 4 months	Clubs
Uni friends	Once a month	Home

Table 4.7

Participant's Social Groups

	Social groups categorised by group type					
	Intimacy	**Intimacy/ task-oriented**	**Task-oriented**	**Intimacy /task-oriented**	**Social categories**	**Loose associations**
Participants	**High school**	**University /TAFE**	**Work function**	**Work social**	**Community**	**Acquaintances**
Tom	X	X				
Edward	X	X	X	X		
John	X		X	X		

	Social groups categorised by group type					
	Intimacy	**Intimacy/ task-oriented**	**Task-oriented**	**Intimacy /task-oriented**	**Social categories**	**Loose associations**
Participants	**High school**	**University /TAFE**	**Work function**	**Work social**	**Community**	**Acquaintances**
Dave	X			X		
Mark	X	X		X		
Kate	X	X		X		X
Amy		X	X	X		
Jo		X	X			
Tiff		X	X	X		
Teddy	X		X	X		
Alan			X	X	X	X
Alexi	X	X				
Alandra			X	X		
Kelly			X	X		
Berry		X		X		
Tanya	X	X				
Ellen	X	X	X	X	X	X
Abby	X	X		X		

High School Group

The high school group was found to have a strong, positive correlation towards alcohol consumption.

> *"Yeah, when they come together I might celebrate once every six months or something with my high school friends but when we celebrate we celebrate big as in like we drink a lot. Everybody, not competes, but they try and drink as much as they can"* (**Edward, 22**).
>
> "*It's just acceptable to drink a lot in that group"* (**Tanya, 26**).
>
> *"When you're younger you don't know your limits so you learn it at some points. So you drink a lot and it's the only way to know to your limits unfortunately"* (**Abby, 29**).
>
> *"I was by no means getting drunk every weekend in high school, but I did have a few drinks. My parents were quite, not lenient, but they were, they'd send me off to a party with two or three Cruisers. I'd have to be home by midnight or one; I think it was one when I was in Year 12 because that's when my dad went to bed; so I had to be home before then, they had to know how I was getting there and leaving, but other than that they were quite lenient. Whereas my friends that were brought up with a lot less leniency they got to uni and wrote*

themselves off and didn't really have any idea about sensible drinking" (**Kate, 22**).

Drinking a lot in this group was found to be acceptable and desirable. As drinking was a new experience for this particular group, it was seen as a way of learning about alcohol and testing limits and boundaries. Consistent with previous literature, experimentation with alcohol and other drugs is part of teen psychosocial development, with testing limits – both physical and psychosocial – being part of the process of maturation into adulthood (Bonomo, 2005). As Kate's quote demonstrates, those who consume at an early age seem to have learnt how to consume by the time they mature whilst those who have not learnt to consume properly, do not consume at appropriate levels once they mature. It is through trial and error that young people learn acceptable or appropriate limits of behaviour of alcohol consumption (Bonomo, 2005).

University/TAFE group

The university and TAFE groups were also found to have a similar, positive correlation towards alcohol consumption.

"So when they do drink it's a lot they're more the bingeing type as opposed to the other one which is more laid out" (**Edward, 22**).

"...it was a tough class and obviously pretty depressing subject and we were just like [Tom makes a sad face]. So we'd go out to the university bar after our lecture" (**Tom, 23**).

"*Alcohol is mainly used to de-stress and it's cool"* (**Ellen, 23**).

It has been found that students are more likely to binge than peers not at university (Gill, 2002). Heavy alcohol use is partially motivated by discourses that position drinking as a "normal" part of studenthood (Dempster, 2011). Additionally, drinking has significant social and functional meanings to students' identities (Tan, 2011).

Rejuvenation after lectures by drinking at the university bar was also seen as a motive by this particular group. The use of the bar as a rejuvenation servicescape may help students to recover from directed attention fatigue (DAF), a process

whereby a person's ability to direct attention in thought and perception to environmental stimuli is a biological mechanism which becomes fatigued with use (Rosenbaum, 2009). People may recover from DAF by spending time in restorative environments that facilitate recovery (Rosenbaum, 2009). These "third places" permit their patrons to escape from their external roles and to enter into associations with others that are not premised on the social qualifications of the people involved (Oldenburg & Brissett, 1982). Restorative third places have three main commonalities: that of being away, such as breaking a person's day-to-day routine; fascination, which encompasses attention grabbing aspects; and finally, compatibility, which refers to a person's sense that they belong there (Rosenbaum, 2009).

Work Function

Keeping a professional atmosphere during work was an important factor that influenced alcohol consumption.

> "*I like to keep obviously a degree of professionalism there. I'm not going to get really drunk and make an arse of myself"* (**Kate, 22**).
>
> "*You don't drink that much because you need to maintain a professional image"* (**Ellen, 23**).

One's work reputation needed to be kept intact by moderating alcohol consumption at a low level. Research has previously found that drinking norms are the strongest predictor of employee problem drinking, with workplace culture, alienation, stress and policy enforcement all impacting on levels of alcohol consumption (Bacharach et al., 2002).

Work Social

> "*Sometimes, though, if some people had a real rough week it will be, 'Okay, let's get absolutely smashed'"* (**John, 21**).

This notion of rejuvenation appears again as a way of coping with work.

> "*We usually drink more because there is peer pressure, plus the alcohol is usually cheaper or free"* (**Ellen, 23**).

"*It's an industry where alcohol is widely consumed and there's a toxic culture of use and abuse. There's a lot of stress due to constant deadlines and people use it as an escape"* (**Tanya, 26**).

As Ellen mentions, cheap and free alcohol play a role in heavy alcohol consumption. As Tanya's quote highlights, certain industries have "a toxic culture of use and abuse" due to stress and constant deadlines. Consistent with prior research, work stress plays a role in excessive drinking (Bacharach, Bamberger, & Sonnenstuhl, 2002).

Community Group

The community group, which is formed around collective interests, such as a religious group, appears to have little effect on heavy alcohol consumption. As Ellen says, alcohol is just used as a social lubricant with no peer pressure.

"Usually there is no peer pressure; alcohol is just used as a social lubricant" (**Ellen, 23**).

Research has shown that, when there is a belief that the community cares about alcohol use, there may be some preventative effects (Song, Smiler, Wagoner, & Wolfson, 2012).

Acquaintances

Drinking with acquaintances has a similar effect to that of a work function group, with people trying to maintain an appropriate image.

Interviewer: Then acquaintances?

"At uni and people are people. You're stuck in a group assignment and you get close to. We'll probably see each other for a little bit, but often it just fizzles out. Generally we'll just, we'll go to the Guild bar or something like that, but they're not people I see very much socially otherwise" (**Kate, 22**).

"*You wouldn't drink that much because you want to maintain a desirable image or profile"* (**Ellen, 23**).

Maintaining an appropriate image to others – especially those whom one barely knows, like an acquaintance – was important for this interviewee. Each group, with its corresponding effect on alcohol consumption and reason why this might occur, is detailed in Table 4.8.

Table 4.8

Effect of Groups on Alcohol Consumption

Group	Effect on alcohol consumption	Why
High school	Increase	Reliving the glory days Nostalgia
University/TAFE	Increase	Student lifestyle, Rejuvenation
Work function	Neutral	Reputation
Work social	Increase	Party atmosphere, Rejuvenation Culture
Community (shared interests)	Neutral	No peer pressure Drinking just socially
Acquaintances	Decrease	Reputation

4.6 Friendship Group Influence

The friendship group influences levels of consumption in three main ways: (1) gender composition; (2) the nature of the drinking occasion; and (3) through social connectedness and intimacy.

4.6.1 Gender Composition

Gender composition implies that different combinations of genders within the friendship group will affect the motives for drinking which, in turn, affect levels of alcohol consumption. All-male groups, all-female groups and mixed groups were found to have different group motives for drinking.

All-Male Group

Competition

> ***Interviewer: Are people trying to compete with each other at all?***
>
> *"To a degree they probably are"* (**Teddy, 30**).
>
> "*Sometimes. It's bad"* (**Dave, 23**).

Competition amongst group members was associated with higher levels of alcohol consumption. This group competition involved group members "trying to win" the competition by competing with each other. Increased consumption because of competition has been found to exist in previous research (Collins, Parks, & Marlatt, 1985).

Copying

> ***Interviewer: So other group members would just try and go...***
> *"One for one all the way. Yes I suspect that's exactly how it goes"* (**Teddy, 30**).

Copying each other was another way that alcohol consumption increased within a group. This mimicry has been found in the literature to occur in food intake with behavioural mimicry explaining the synchronised effect of food intake (Hermans et al., 2012). Behavioural mimicry refers to a process in which a person unwittingly imitates the behaviour of another person (Hermans et al., 2012). In terms of alcohol consumption, previous research has found young adults mimicked the sipping behaviour of a same-sex peer during a thirty-minute interaction, with young adults taking a sip directly after the other did (Larsen, Engels, Souren, Overbeek, & Granic, 2010). Additionally, researchers have demonstrated that young adults even mimicked the drinking behaviour of movie actors, whilst watching a movie (Koordeman, Kuntsche, Anschults, van Baaren, & Engels, 2011) – evidence that mimicking the behaviour of others can be triggered without a real-life interaction (Hermans et al., 2012).

Next-day commitments

Next-day commitments were found to have a negative effect on rates of drinking. Respondents gave reasons for not drinking, as shown below:

> "*Because I've got to get up early on Saturday or Sunday mornings to go for a ride, so that kind of made me stop going out at night and drinking as much. Plus it's coming to the beach weather, I like going to the beach, to decide to try and have a fairly quiet night so I can actually get up early and go to the beach"* (**Dave, 23**).

"It's just like oh he's not drinking, oh she's gotta study or he's gotta drive you know" (**Tom, 23**).

Situational influences have an impact on alcohol consumption. Here, next-day commitments interfere with drinking levels.

Conformity

"*You want to at least know that you're I dunno a cool person that you're at least in touch with your fellow student*" (**Tom, 23**).

Conformity to the group's standards was also important in determining alcohol consumption.

All-Female Group

Play

Interviewer: Why does the group drink?

"Maybe to lower inhibitions, stay awake/more chatty" (**Kelly, 23**).

"*How do we know when we've had a good night out when, I guess, people are drunk and when they're happy"* (**Amy, 25**).

Play was a factor that appeared in the all-female group. This involved hedonic use of alcohol. Hedonistic consumption is "designed to allow consumers to 'let go' and experience the pleasures of indulgence without attendant risks in a hedonistic yet bounded drinking style" (Measham & Brian, 2005, p. 274). Although this style of consumption involves the consumption of alcohol at levels that may appear excessive, it involves a strategic dimension that centres predominantly on the notion of control (Szmigin et al., 2008).

Winding down

"... a reward too, like if I've had a busy week or whatever I like, "Oh, I'll have a few drinks" (**Tiff, 24**).

"*We like to just go and sit and have a drink and relax"* (**Amy, 25**).

"Just relaxing with the ladies" (**Abby, 29**).

Winding down was another aspect that appeared in the female group. This involved relaxing and, as mentioned by Tiff, occurred after a busy week.

Copying

Findings from research carried out in the 1970s (Caudill & Marlatt, 1975) have revealed that we do adjust our alcohol consumption to those around us, irrespective of whether or not these strangers behave "warmly" or "coldly" toward us. This is consistent with social learning theory, where modelling occurs when a person's behaviour corresponds to another person's concurrent drinking behaviour (Borsari & Carey, 2001). Furthermore, research by Caudhill & Lipscomb (1980) found that the alcohol consumption of alcoholics can be increased or decreased by modelling influence, both in laboratory analogue and semi-naturalistic bar settings. More recent observational research has shown that drinking in groups means more alcohol is consumed and drinking in rounds also leads to more alcohol consumption (Rundle-Thiele, 2009).

Next-day commitments

> *"If someone comes for maybe a drink or two or just comes and meets us for dinner and doesn't come out then it's generally because they've got uni work to do or they've got work the next day"* (**Kate, 22**).

Next-day commitments were a motive not to consume or not to consume as much. This is consistent with the literature on drinking responsibly (Barry & Goodson, 2011). A number of scale items within the literature match up with these motivations to consume responsibly, such as "because I have to drive myself home", "because of my work-related responsibilities", "because I have to get up early in the morning for class" and "because I need to study for a test or complete my school work" (Barry & Goodson, 2011).

Mixed Gender Groups

Mixed groups consisted of a mixture of genders. Two main forms were found: that of friends who were mostly single, and couples.

Confidence booster

Using alcohol as a confidence booster was identified within the mixed-gendered groups.

> *"I reckon it would probably increase as more girls came"*
>
> ***Interviewer: Really?***
>
> *"Yes, it's weird."*
>
> ***Interviewer: Why's that?***
>
> *"I don't know. It wouldn't be a dramatic increase. It might be a little bit. It might be like a confidence thing, I suppose, with the people you feel a bit confident around. Around girls, I think. That's probably the main reason"* (**Dave, 23**).

This type of alcohol consumption was typically displayed by the male members as a form of social lubricant and in order to reduce inhibitions associated with talking to girls. This type of drinking also involves trying to improve self-efficacy – people's belief in their ability to influence events that affect their lives (Bandura, 2010). In tune with previous literature, alcohol-related self-efficacy has been shown to be a significant predictor of intentions to consume alcohol among adolescents (Aas, Klepp, Laberg, & Aarø, 1995).

Competition

Competition between females and males in the group was identified.

> *"There are some girls in the group who were trying to drink to impress the boys which is just stupid. ... but yes I think they could drink more if there was a boy with them"* (**Natasha, 24**).
>
> ***Interviewer: Because they're trying to impress him?***
>
> *"Yes"* (**Natasha, 24**).

This view is somewhat consistent with the literature on the role of gender and performance, where Lount, Messé & Kerr (2000, p. 221) found that "males tended to show even greater motivation gain when paired with a more capable female." However, here we have females drinking more with the intention of impressing the males. A possible explanation is that comparison is stronger in a context where one's ego is threatened and is also more likely when one cares more about the group, one's

standing within the group and its success (Kerr et al., 2005), which is probable in friendship groups where members are highly cohesive and group identification is strong (Hamilton & Hewstone, 2007). Furthermore, groups that are heterogeneous in abilities, skills or genders often outperform more homogenous groups (Jackson, 1992) and, as such – all things being equal – an all-male group and a mixed gender group would drink more, due to competition, than an all-female group. Another possible explanation is that traditional male competitive orientations might be appearing in women's drinking patterns. Within the literature, Kerr et al. (2007) found that women's efforts in pairs could be increased when primed with competitive orientations. Thus, females in a group of males might be drinking more, because they are primed by the males in the group. The group motives for drinking, compared across gendered groups, and the group motives for alcohol consumption are shown in Table 4.9 and Table 4.10 respectively.

Table 4.9

Group Motives for Drinking

All-male group	**Effect on drinking levels**	**All-female group**	**Effect on drinking levels**	**Mixed group**	**Effect on drinking levels**
Competition	+	Winding down	-	Competition	+
Copying	-/+	Play	-/+	Confidence booster	+
Next-day commitments	-	Copying	-/+	Copying	-/+
Conformity	-/+	Next-day commitments	-		

Table 4.10

Group Motives for Alcohol Consumption

Motive	**All-female group effect**	**All-male group effect**	**Mixed group effect**
Copying	-/+	-/+	-/+
Competition		+	+
Next-day commitments	-	-	
Conformity		-/+	
Winding down	-		
Play	-/+		
Confidence booster			+

Copying was found in all groups and was found to either increase or decrease alcohol consumption, depending on the group's aim. Competition was noted in both the all-male group and the mixed group, but not in the all-female group. Next-day commitments were mentioned in both the all-male and all-female groups, but not in the mixed group.

4.6.2 Drinking Occasions

Two distinct drinking occasions were found within the data: first, that of celebrating milestones; and second, that of habitual or regular drinking occasions. Celebrating milestones consisted of drinking to celebrate important life changes or events, such as turning 18 or 21. The main motives for celebratory drinking were rites of passage and socialisation. Consistent with previous research, rites of passages were associated with the transition into adulthood (Sande, 2002).

> *"When you're younger you don't know your limits so you learn it at some points. So you drink a lot and it's the only way to know your limits unfortunately"* (**Abby, 29**).

Habitual or regular drinking occasions were usually such things as after-work drinks on a Friday:

> "*For work it's on a weekly basis, because with staff drinks we have to do it every Friday*" (**Dave, 23**).

These were drinking occasions that were done regularly. The main motives for this type of drinking occasion were winding down, stress release, catching up, socialisation and rejuvenation. Catching up or socialisation was present in habitual drinking:

> "*Just a social thing, just to catch up, because the office is kind of split up. You don't really see many people that often during the week, because they're on the other side. So it's just a catch-up for everyone to get together and talk about how the week was"* (**Dave, 23**).

In terms of rejuvenation, drinking to rejuvenate one's mind, after being mentally fatigued, was present:

"...it was a tough class and obviously pretty depressing subject and we were just like [Tom makes a sad face]. So we'd go out to the university bar after our lecture" (**Tom, 23**).

Table 4.11

Drinking States for Celebratory and Habitual Drinking Occasions

State categories	Celebratory	Habitual
Arousal states		
Rites of passage	✓	
Catching up "socialisation"	✓	✓
Non-arousal states		
Winding down		✓
Stress release		✓
Rejuvenation		✓

Drinking to celebrate also involved catching up or socialising with friends.

"*But usually it's to celebrate something, usually hey let's just party I suppose you could say"* (**Edward, 23**).

Interviewer: Yeah and that could be like celebrate end of exams or end of an assignment?

"Yeah. Like we had lots of celebrations without alcohol but always the big ones were you know lets knock back a bunch of beers and talk about old times" (**Edward, 23**).

"We normally celebrate big occasions as well, so birthdays and stuff like that" (**Teddy, 30**).

"*... when you celebrate you have a drink"* (**Alandra, 29**).

"*... because you drink to celebrate something"* (**Tanya, 26**).

Celebratory drinking was also associated with high levels of alcohol consumption:

"*Yeah, when they come together I might celebrate once every six months or something with my high school friends but when we celebrate we celebrate big as in like we drink a lot. Everybody not competes but they try and drink as much as they can"* (**Edward, 23**).

Table 4.12

Drinking Motives for Arousal States

Motives	Arousal states	Non-arousal states
Competition	+	N/A
Celebration	+	
Winding down		-
Stress release		-
Rejuvenation		-

Arousal refers to the state of general physiological and psychological activation and alertness experienced by an individual that varies in degree, over time (Hill, 2001). Arousal is zero at death, low during sleep, moderate during normal daily activities and high at times of excitement, emotion or panic (Coon & Mitterer, 2014). Arousal states and their relationship to motives and alcohol consumption occasions are shown in Table 4.11 and 4.12.

4.6.3 Social Connectedness and Intimacy

Social connectedness is a key group motive for drinking, with the majority talking about being social with their friendship group. Social connectedness reflects an internal sense of belonging and is defined as the subjective awareness of being in close relationship with the social world (Lee & Robbins, 1998). The experience of interpersonal closeness in the social world includes proximal and distal relationships with family, friends, peers, acquaintances, strangers, community, and society. According to Lee and Robbins (1998), it is the aggregate of all these social experiences that is gradually internalised by the individual and that serves as the foundation for a sense of connectedness.

> *"That you're, I dunno, it's just if like all things like you know socialising with other human beings is a good feeling. So it's good to be in touch with your fellow students"* (**Tom, 23**).

> *"I guess it's just seen as a social thing, really: just sit around and – maybe the way I've been brought up – everyone just sits around and has a few drinks and talks"* (**Dave, 23**).

"*You know, I guess, it's quite social for us. If we go out, even if there's only four or five of us that go out in a small group we can catch up with extended friends that we might not see otherwise"* (**Kate, 22**).

Social connectedness was also an indicator of success. For example, John mentions mentions that there's a good cohesiveness within the group.

Interviewer: How does the group know it's had a good night out?

"*There's a good cohesiveness within the group. So sometimes it can be good and everyone will just click, and then everyone knows it's a pretty good night"* (**John, 22**).

"*It's just about socialisation and catching up with friends because a lot of my partner's friends live in Melbourne or they don't live around us; so generally when we do catch up it's generally for socialisation, share stories and just have laughs"* (**Amy, 25**).

Homophily, the tendency for individuals to associate and bond with similar others (McPherson, Smith-Lovin, & Cook, 2001), was also displayed:

"Ummm student places for sure. I remember like, cause like you know as a uni student you want cheap drinks. You want to be surrounded by people who aren't workers. You want to be surrounded by students. You want to be surrounded by college folk" (**Tom, 23**).

Homophily limits people's social worlds in a way that has powerful implications for the information they receive, the attitudes they form and the interactions they experience (McPherson et al., 2001). It may be likely that those who hold similar beliefs about alcohol also consume at similar rates. Thus, a high-drinking group would consume at high rates, because all of the group members believe this to be the correct manner in which to behave. These motives and their relationship for intimacy levels are shown in Table 4.13.

Table 4.13

Alcohol Motives for Levels of Intimacy

Motives	Low intimacy	High intimacy
Socialisation		✓
Homophily		✓

4.6.4 Conjunctive Task

Conjunctive tasks are activities which make group members indispensable to the group and, thus, they must participate in order for the group to achieve its goal (Kerr & Hertel, 2011). The conjunctive task phenomenon was reflected in group behaviours, such as certain types of drinking games, buying rounds (shouts) or shots for the whole group, and buying drinks for one another.

Drinking games were seen by some as an activity that everyone must participate in, unless they were not playing from inception.

> ***Interviewer: "… and what would happen if someone didn't want to play?"***
> *"You play. You don't not play, like, yes you like – you'd get ribbed for it like, – it's like, why are you even there if everyone else is getting wasted, it's like, 'You want to sit there and be boring?'"* (**Tiff, 24**).

> ***Interviewer: "What happens if someone doesn't want to play but they're drinking?"***
> *"I'd say they half way through the game and then decide they're not going to play that would, they'd get really given a pretty hard time about it. ... even if you didn't want to play and you didn't really have a reason, like unless you'd said I've got work or I've got to do this or that, I think otherwise you'd get pretty much roped into playing"* (**Kate, 22**).

This kind of group activity requires members to either participate or face a degree of social exclusion. Drinking games might involve participants trying to win – in which case it would be activating a competitive aspect of Köhler's motivational gains – or just playing to fit in. Drinking games were also seen as something which was conducted at home and not out in public venues.

"Drinking games are more for house parties and gatherings before you go out" (**John, 21**).

"Usually at home, when we're just sitting around. We normally do that just to try and save some money" (**Dave, 23**).

A selection of drinking games identified by participants is outlined in Table 4.14.

Table 4.14

Selection of Drinking Games from Participants

Drinking games	Explanation
Four Kings	Players must drink and dispense drinks based on cards drawn; each card has a rule that is predetermined before the game starts.
Save the Queen	You throw a coin in their drink and they need to scull it saving the Queen from downing.
No name	Putting an empty glass in a jug and then everyone would pour a bit in then the person who finally makes it sink would have to scull the glass in the middle.
Bear Grylls	Set of rules written down when Bear Grylls does something.

Buying drinks amicably (i.e. buying drinks between two people on a quid pro quo basis) was seen as more common and more favourable than buying rounds.

Interviewer: "Do group members buy drinks for each other? Or have rounds?"

"Well I dunno about rounds, but like we'd buy each other drinks amicably" (**Tom, 22**).

"But generally it can be I'll get this, you can get the next one." (**John, 21**)

"We might get one person a drink and they're get two drinks next time" (**Dave, 23**).

"… like normally with one or two people rather than the larger group" (**Kate, 22**).

As found by Rundle-Thiele (2009), buying rounds is likely to increase risky drinking.

4.6.5 Collective Intentions in Groups

Participants talked about their groups and how there was a collective reason or motive to drink. For instance:

> *"We were just like yes we are law people and we are stressed cause of all the study, we're happy to at least have time off"* (**Tom, 22**).

Tom talked about his group and how the motive of winding down after a stressful event is one reason why the group members consume alcohol. The motive of commitments getting in the way of alcohol consumption was also a collective intention of the group:

> *"We would do it in the first three weeks of uni and then because things got because then we could no longer do that"* (**Edward, 22**).

Group decision-making and taking group members into consideration were also evident:

> *"We might go a BYO restaurant somewhere and take a couple of bottles of wine. Otherwise we'll generally meet before we go out at one of the girl's houses. We'll have drinks before we go, I guess, we'd probably drink five or six drinks at least before we go. We're all uni students and it keeps the costs down which is actually, a pretty big consideration."* (**Kate, 22**)
>
> "*So if we're going to meet somewhere first, we meet somewhere central.*" (**Kate, 22**).

The price of drinking as well the location had an impact on where the group decided to drink. It needed to be a place that was convenient and cheap for everyone.

4.7 The Influence of Friendship Group on Alcohol Consumption

This study has addressed the first research question: What are the friendship group-level motives for alcohol consumption? The data have identified seven group-level motives for the effect of friends on alcohol consumption, as well as three factors that influence these relationships (see *Figure 4.1*).

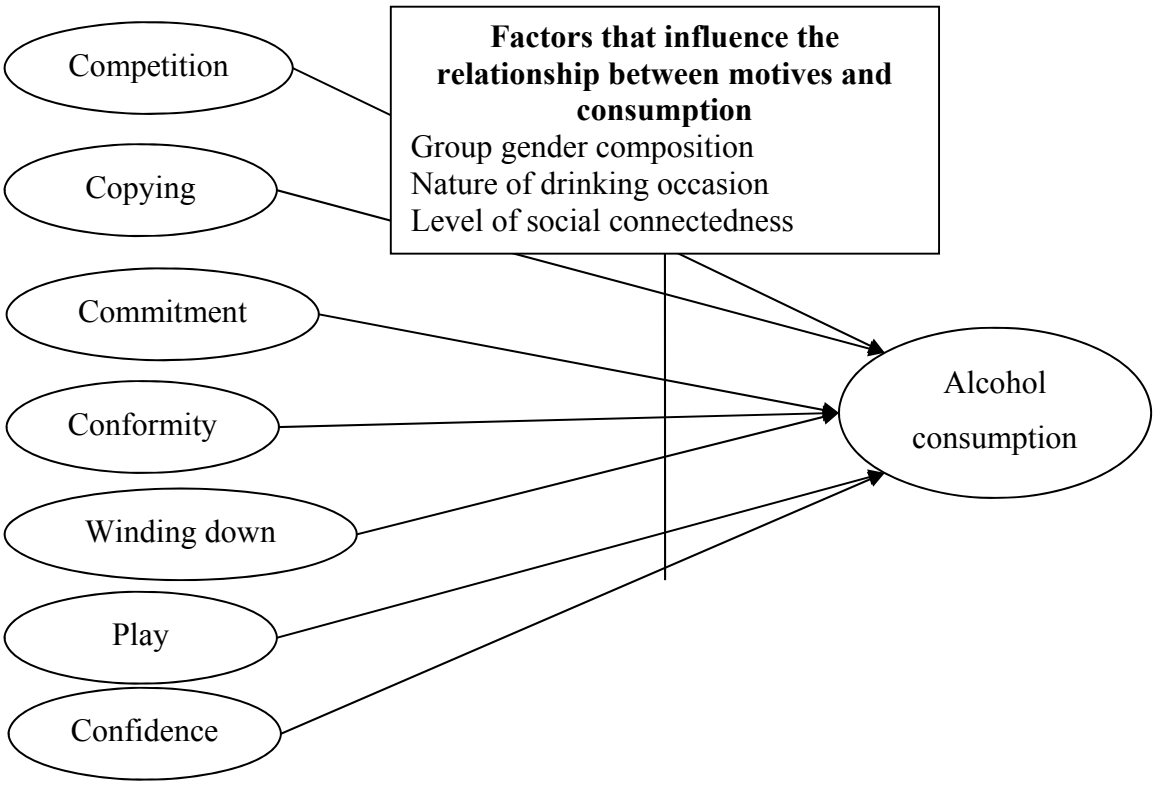


Figure 4.1. Group Level Motives for Alcohol Consumption

Seven motives were identified from the qualitative data analysis. These were competition, copying, commitments, conformity, winding down, play, confidence and conjunctive task. Competition, copying and conjunctive task were consistent with Köhler motivational gains. Köhler's group motivation effect was made up of social comparison and conjunctive task (also known as indispensability), with social comparison being made up of copying and competition. The competition, copying and conjunctive task motives were similar to those found in the literature. Köhler motivational gains are, however, typically measured with dyads (Hertel & Weber, 2007) and this research found the same effects to be working within groups of people. Additionally, the outcome variable was usually some persistence task that could be repeated (such as lifting weights), whereas this research examined alcohol consumption and found the effect still existed.

Copying behaviour was present in the literature and the qualitative interviews and operationalised itself in the same manner – people copied behaviour consistent with others around them. Competition also appeared to occur in a similar manner to the literature, with people "trying to win". Conjunctive task operationalised itself

differently when compared with the literature. Within the literature, conjunctive task expressed itself as the higher effort of team members when they realise that their contribution is highly critical for the overall team outcome (Hertel & Weber, 2007). Within the interviews, this was found to occur when doing rounds or shots, or playing drinking games, where the participants were part of a task that involved all group members participating.

Collective intentions were also found to exist in terms of the adoption of similar behaviours between the group members, such as all participants playing drinking games at once. This was also seen in the promotion of the drinking game by group members and with group members being ostracised when they did not play. When the majority of group members had similar motives or the same motive or reason to drink, then they can be said to have a collective intention. If the group-level construct of competition is activated then the group has a collective intention to drink more due to competitive motives.

4.7.1 New Motives

Five additional motives, different from Köhler's motivational gain, were also uncovered from the qualitative interviews: commitments, conformity, winding down, notions of play, and confidence.

Commitments were activities or issues that "got in the way" of drinking. These included work-related commitments (such as getting up early for work) and university related commitments (such as studying for exams). Driving was another commitment that got in the way of drinking alcohol. Consistent with the past literature commitments were found to be drivers of responsible drinking (Barry & Goodson, 2011). Personal obligations and responsibilities (such as school, work, and family) all contributed to drinking responsibly (Barry & Goodson, 2011).

Conformity involved conforming to the group's standards in regards to behaviour. Conformity refers to trying to fit with an admired group or to avoid peer rejection (Grant et al., 2007). This included drinking more when the group drank more and drinking less when group members drank less – thus conforming to the group's

standards. Peer pressure is typically reported when talking about conformity and alcohol consumption. Peer pressure is a combination of three distinct influences: overt offers of alcohol, modelling and social norms (Borsari & Carey, 2001). Overt offers of alcohol can range from polite gestures to intense goading or commands to consume; modelling, occurs when the student's behaviour corresponds to another student's concurrent drinking behaviour; and perceived social norms can serve to make excessive alcohol use appear common and acceptable to the student (Borsari & Carey, 2001).

Winding down was about relaxing and usually occurred after a strong focus on work and a need to reduce this tension. The tension-reduction theory of drinking asserts that people consume alcohol because it reduces tension (Greeley & Oei, 1999). Some individuals who hold certain beliefs about alcohol will, under certain circumstances, consume alcohol for its stress-response dampening effects (Greeley & Oei, 1999).

Play was associated with drinking for hedonic reasons, such as fun and playfulness, rather than for task completion reasons. Hedonic goals are strong predictors of college-student alcohol consumption (Katz, Fromme, & D'Amico, 2000).

Confidence was associated with drinking to boost one's self-confidence in a social situation. Drinking to enhance social confidence was found to occur within the literature: participants found alcohol made parties more fun, made conversations more interesting and added warmth to social occasions (Smith, Abbey, & Scott, 1993).

4.7.2 Potential Moderators

Three potential moderators were identified: gender composition, drinking occasions, and social connectedness.

Gender composition refers to three types of group composition: an all-female group, a group consisting of all males, and a mixed-gendered group. Copying behaviour occurred within all three groups, with a correlation between motive and alcohol consumption. Competition only occurred within the all-male group and the

mixed group, with people trying to impress one another with their drinking prowess – this had a reported positive effect on alcohol consumption. Next-day commitments were found to occur within both the all-male and all-female groups, with a negative relationship between motive and alcohol consumption. Conformity was found to occur only in the all-male group, and was correlated with alcohol consumption. Winding down was found to occur only in the all-female group, and had a negative effect on alcohol consumption. Play was also found to occur only in the all-female group, and had a positive correlation to alcohol consumption. Finally, the confidence booster effect appeared to occur only within the mixed group and had a positive effect on alcohol consumption. Taken together, the relationships between motives and alcohol consumption are found to be moderated by gender composition, depending on the gender mix, as detailed by Table 4.15.

Table 4.15

Motives for Drinking and Gender Combinations

Motives	**All-female group effect**	**All-male group effect**	**Mixed group effect**
Copying	-/+	-/+	-/+
Competition		+	+
Next-day commitments	-	-	
Conformity		-/+	
Winding down	-		
Play	-/+		
Confidence booster			+

Drinking occasions represent drinking styles adopted for a given situation. Two main drinking occasions were identified in the data: celebratory and habitual drinking. Within these two styles exist arousal states – both arousal and non-arousal represent states of being, with each one associated with different factors. Rites of passage were associated with celebratory drinking; socialisation was associated with both celebratory and habitual styles; and winding down, stress release, and rejuvenation were associated with habitual drinking. Based on the arousal states (which are associated with drinking style), different motives were found to correlate with alcohol consumption. Competition and celebration were associated with arousal and had strong links to alcohol consumption. Whereas winding down, stress release,

and rejuvenation were associated with non-arousal states and negatively associated with alcohol consumption, as detailed by Table 4.16 and Table 4.17.

Table 4.16

Arousal States

Categorisation states	Celebratory	Habitual
Arousal states		
Rites of passage	✓	
Catching up "socialisation"	✓	✓
Non-arousal states		
Winding down		✓
Stress release		✓
Rejuvenation		✓

Table 4.17

Motives and Arousal States

Motives	Arousal states	Non-arousal states
Competition	+	N/A
Celebration	+	
Winding down		-
Stress release		-
Rejuvenation		-

Social connectedness is the degree to which people feel an internal sense of belonging and is defined as the subjective awareness of being in close relationship with the social world (Lee & Robbins, 1998). The level of social connectedness felt by the subject will potentially have an effect on the relationship between the motives and alcohol consumption.

4.8 Summary

This section addressed the first research question: What are the friendship group-level motives for alcohol consumption? Participants' views on the differences between risky and moderate drinking were explored, followed by the identification of nine motives and three potential moderating factors. A conceptual model was developed, which forms the basis of the proposed model in Study 2.

Chapter 5 Model Development and Hypotheses

5.0 Introduction

The previous chapter presented the qualitative findings of Study 1, which examined the research question RQ1: What are the friendship group-level motives for alcohol consumption? The results of the qualitative study revealed that a number of different motives had the potential to affect alcohol consumption in groups and also identified a number of different moderators. The next stage of the research seeks to determine RQ2a: What is the relationship between friendship alcohol motives and alcohol consumption? and RQ2b: Do friendship group features moderate the relationship between motives and alcohol consumption?

5.1 Proposed Models

Based on the qualitative findings of Study 1, three proposed models were developed for each moderator, which will test the relationships between group-level motives and alcohol consumption.

5.2 Adapting the Qualitative Concept Model

The original model is based on the qualitative data collected in Study 1. However, upon closer examination, a number of changes needed to be made to the model. Firstly, "play" was changed to "hedonism" to reflect the construct more accurately. Play was associated with drinking for hedonic reasons such as fun and playfulness, rather than as a form of task completion. As hedonic goals have been identified as strong predictors of college-student alcohol consumption (Katz, Fromme, & D'Amico, 2000). Secondly, "confidence" was more accurately named "self-confidence booster". The final model is shown in *Figure 5.1*.

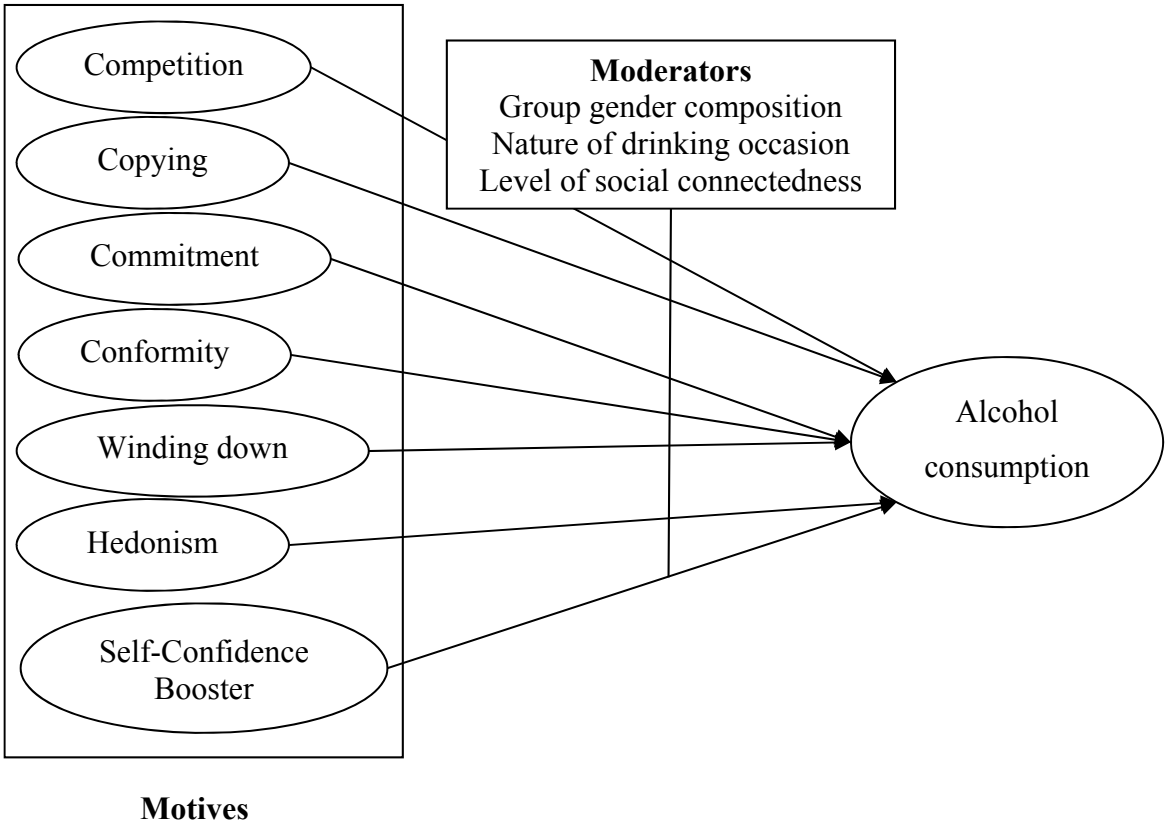


Figure 5.1. Model Development

5.3 Regression Model with Group-Level Motives and Alcohol Consumption

The following hypotheses are developed from the model, and test the ability of group-level motives to predict alcohol consumption.

5.3.1 Relationship Between Competition Amongst Group Members and Alcohol Consumption

Competition within groups has the power to motivate people to consume more alcohol, as each person tries to win. Competition exists when people work against each other to achieve a goal that only one or a few may attain (Oermann & Heinrich, 2006). In other words, people will try to win the game by drinking the most, with only one or a few winning. It is hypothesised that competition among group members is significantly and positively associated with alcohol consumption.

H_1: *Competition among group members is positively associated with alcohol consumption.*

5.3.2 Relationship Between Copying and Alcohol Consumption

Copying was present in the literature and the qualitative interviews and was operationalised in a similar manner: people copied behaviour consistent with others around them. Past literature has shown that people automatically mimic numerous aspects of their interaction partners, including their postures, gestures, mannerisms, speech patterns, syntax, accents, facial expressions, and even moods and emotions (Chartrand & Bargh 1999; Chartrand, Maddux, & Lakin 2005; Dijksterhuis, Chartrand, & Aarts 2006). It has been suggested that consumer behaviour can be driven by processes that occur outside of awareness, intent, and control (Tanner, Farraro, Chartrand, Bettman, & Van Baaren, 2008). Thus, the hypothesised relationship that copying drinking behaviour is significantly and positively associated with high alcohol consumption.

H_2: *Copying drinking behaviour is positively associated with alcohol consumption.*

5.3.3 Relationship Between Commitments and Alcohol Consumption

Commitments were activities or issues that "got in the way" of drinking. These included work-related commitments (such as getting up early for work) and university related commitments (such as studying for exams). Driving was another commitment that got in the way of drinking alcohol, as identified in the qualitative interviews. Consistent with past literature, commitments were drivers of responsible drinking (Barry & Goodson, 2011). Personal obligations and responsibilities such as school, work, and family all contributed to drinking responsibly (Barry & Goodson, 2011). Therefore, the hypothesised relationship is that commitments are significantly and negatively associated with alcohol consumption. That is, the more commitments the person has, the less alcohol they will consume.

H_3: *Commitments are negatively associated with alcohol consumption.*

5.3.4 Relationship Between Alcohol Conformity and Alcohol Consumption

Conformity involved conforming to the group's standards, in regards to behaviour. Conformity refers to trying to fit with an admired group or to avoid peer rejection (Grant et al., 2007). This included drinking more when the group drank more drinking less when group members drank less – thus conforming to the group's standards. Peer pressure is typically reported when talking about conformity and alcohol consumption. Peer pressure is a combination of three distinct influences: overt offers of alcohol, modelling and social norms (Borsari & Carey, 2001). Overt offers of alcohol can range from polite gestures to intense goading or commands to consume; modelling occurs when the student's behaviour corresponds to another student's concurrent drinking behaviour; and perceived social norms can serve to make excessive alcohol use appear common and acceptable to the student (Borsari & Carey, 2001). The hypothesised relationship is that alcohol conformity is significantly and positively associated with levels of alcohol consumption.

H_4: *Conformity is positively associated with alcohol consumption.*

5.3.5 Relationship Between Winding Down and Alcohol Consumption

Winding down was about relaxing and usually occurred after a strong focus on work and a need to reduce this tension. The tension-reduction theory of drinking asserts that people consume alcohol because it reduces tension (Greeley & Oei, 1999). Some individuals who hold certain beliefs about alcohol will, under certain circumstances, consume alcohol for its stress-response dampening effects (Greeley & Oei, 1999). People who consume to wind down will consume more alcohol to achieve this outcome. Thus, the hypothesised relationship is that winding down is significantly and positively associated with alcohol consumption.

H_5: *Winding down is positively associated with alcohol consumption.*

5.3.6 Relationship Between Hedonism and Alcohol Consumption

Past research has described hedonism as individuals and groups who seek instant satisfaction of selfish desires for pleasure (O'Shaughnessy & O'Shaugnessy, 2002). Within the interviews hedonism was associated with drinking for hedonic reasons, such as fun and playfulness, rather than for reasons of task completion. Hedonism has been viewed as a pursuit of "fleeting" pleasures, through which avoidance of pain is the main goal in life (Foxall, 1996). Hedonism has been identified not only as an individual act, but by spreading or sharing their enjoyment people can also give pleasure to others (Campbell, 1987). Calculated hedonism has been defined as a way for young people to purposely pursue drunkenness by chilling out with friends after a difficult week of work or study (Measham, 2008; Szmigin et al., 2008). Hedonic goals are strong predictors of college-student alcohol consumption (Katz, Fromme, & D'Amico, 2000). As such, the hypothesised relationship between hedonism and alcohol consumption is significant and positive.

H_6: *Hedonism is positively associated with alcohol consumption.*

5.3.7 Relationship Between Self-Confidence Booster and Alcohol Consumption

Confidence was associated with drinking to boost one's self-confidence in a social situation. Drinking to enhance social confidence was found to occur within the literature, with participants finding alcohol made parties more fun, made conversations more interesting and added warmth to social occasions (Smith, Abbey, & Scott, 1993). Dutch courage ("the temporary confidence supposedly obtained from drinking alcohol") is also a common feature of drinking alcohol (Gomberg, 1993, p. 86). Thus, alcohol gives people a boost of self-confidence, but people also consume to boost their self-confidence. The hypothesised relationship is that confidence is significantly and positively associated with levels of alcohol consumption.

H_7: *Confidence is positively associated with alcohol consumption.*

5.4 Proposed Model of Gender Composition Moderator Effect

Alcohol consumption and gender comparisons have been well studied within the literature (Keyes, Guohua, & Hasin, 2011; Pfefferbaum, Rosenbloom, Deshmukh, & Sullivan, 2001). While gender may influence drinking alcohol, drinking alcohol may also be seen as a way of "doing gender" and accomplishing both traditional and non-traditional gender identities (Measham, 2002; Peralta, 2007)

Membership in male-dominated entities such as fraternities (Capone, Wood, Borsari, & Laird, 2007), athletic teams (Tewksbury, Higgins, & Mustaine, 2008), law enforcement (Obst, Davey, & Sheehan, 2001) and the military (Gutierrez et al., 2006), is associated with increased alcohol use and drinking-related problems. Male drinking practices in rural pubs persist because they are a site of male power and legitimacy in rural community life (Campbell, 2000). Drinking and heavy drinking is understood to be a form of "macho" or masculine behaviour. Drinking stories for men are important, because they are expressions of a specific type of masculine identity – one that is wild, tough, popular, youthful, aggressive, competitive, confident, and anti-feminine (Schacht, 1996).

H_{8A}: Male participants will consume more than female participants.
H_{8B}: Groups consisting of mostly males will consume more alcohol than groups consisting of mostly females.
H_{8C}: Gender group composition will moderate the relationship between competition and alcohol consumption.
H_{8D}: Gender group composition will moderate the relationship between copying and alcohol consumption.
H_{8E}: Gender group composition will moderate the relationship between commitment and alcohol consumption.
H_{8F}: Gender group composition will moderate the relationship between conformity and alcohol consumption.
H_{8G}: Gender group composition will moderate the relationship between winding down and alcohol consumption.
H_{8H}: Gender group composition will moderate the relationship between hedonism and alcohol consumption.

H_{8I}: Gender group composition will moderate the relationship between confidence and alcohol consumption.

5.5 Proposed Model of Nature of Drinking Occasion Moderator Effect

The nature of the drinking occasion – here defined as habitual or celebratory – played a role in the amount of alcohol consumed by the person. Habitual or regular drinking occasions were usually such things as, after work drinks on a Friday. These were drinking occasions that were done regularly. The main motives for this type of drinking occasion were winding down, stress release, catching up, socialisation and rejuvenation. Catching up or socialisation was present in habitual drinking. Celebratory drinking was usually done for milestones that celebrated important events, such as New Year's Eve. These usually involved heavy amounts of alcohol consumption.

H_{9A}: There will be a significant difference between those who drink on a weekly basis and those who drink for celebratory reasons.

H_{9B}: Drinking style will moderate the relationship between competition and alcohol consumption.

H_{9C}: Drinking style will moderate the relationship between copying and alcohol consumption.

H_{9D}: Drinking style will moderate the relationship between commitment and alcohol consumption.

H_{9E}: Drinking style will moderate the relationship between conformity and alcohol consumption.

H_{9F}: Drinking style will moderate the relationship between winding down and alcohol consumption.

H_{9G}: Drinking style will moderate the relationship between hedonism and alcohol consumption.

H_{9H}: Drinking style will moderate the relationship between confidence and alcohol consumption.

5.6 Proposed Model of Social Connectedness Moderator Effect

Social connectedness represents an internal sense of belonging and is defined as the subjective awareness of being in close relationship with the social world (Lee & Robbins, 1998). The experience of interpersonal closeness in the social world includes proximal and distal relationships with family, friends, peers, acquaintances, strangers, community, and society. According to Lee and Robbins (1998), it is the aggregate of all these social experiences that is gradually internalised by the individual and serves as the foundation for a sense of connectedness. People with high levels of connectedness are better able to manage their own needs and emotions, through cognitive processes (Tesser, 1991). High levels of social connectedness are also associated with feeling very close to other people, easily identifying with others and perceiving others as friendly and approachable, and are more likely to participate in social groups and activities. As such, it is hypothesised that levels of social connectedness will moderate the relationship between some alcohol motives and alcohol consumption. The hypothesised relationships are as follows:

H_{10A}: Social connectedness will moderate the relationship between competition and alcohol consumption.

H_{10B}: Social connectedness will moderate the relationship between copying and alcohol consumption.

H_{10C}: Social connectedness will moderate the relationship between commitment and alcohol consumption.

H_{10D}: Social connectedness will moderate the relationship between conformity and alcohol consumption.

H_{10E}: Social connectedness will moderate the relationship between winding down and alcohol consumption.

H_{10F}: Social connectedness will moderate the relationship between hedonism and alcohol consumption.

H_{10G}: Social connectedness will moderate the relationship between confidence and alcohol consumption.

5.7 Summary of Hypotheses

Based on the theoretical model developed in Study 1, 31 hypotheses were developed, as outlined by Table 5.1.

Table 5.1

Research Questions and Hypotheses

Research questions	Hypotheses
RQ2a: What is the relationship between friendship alcohol motives and alcohol consumption?	**H_1**: Competition among group members is positively associated with alcohol consumption. **H_2**: Copying drinking behaviour is positively associated with alcohol consumption. **H_3**: Commitments are negatively associated with alcohol consumption. **H_4**: Conformity is positively associated with alcohol consumption. **H_5**: Winding down is positively associated with alcohol consumption. **H_6**: Hedonism is positively associated with alcohol consumption. **H_7**: Confidence is positively associated with alcohol consumption.
RQ2b: Do friendship group features moderate the relationship between motives and alcohol consumption?	**H_{8A}:** Male participants will consume more than female participants. **H_{8B}:** Groups consisting mostly of males will consume more alcohol than groups consisting of mostly females. **H_{8C}**: Gender group composition will moderate the relationship between competition and alcohol consumption. **H_{8D}**: Gender group composition will moderate the relationship between copying and alcohol consumption. **H_{8E}**: Gender group composition will moderate the relationship between commitment and alcohol consumption. **H_{8F}**: Gender group composition will moderate the relationship between conformity and alcohol consumption. **H_{8G}**: Gender group composition will moderate the relationship between winding down and alcohol consumption. **H_{8H}**: Gender group composition will moderate the relationship between hedonism and alcohol consumption. **H_{8I}**: Gender group composition will moderate the relationship between confidence and alcohol consumption. **H_{9A}:** There will be a significant difference between those who drinking on a weekly basis and those who

Research questions	Hypotheses
	drank for celebratory reasons. **H_{9B}**: Drinking style will moderate the relationship between competition and alcohol consumption. **H_{9C}**: Drinking style will moderate the relationship between copying and alcohol consumption. **H_{9D}**: Drinking style will moderate the relationship between commitment and alcohol consumption. **H_{9E}**: Drinking style will moderate the relationship between conformity and alcohol consumption. **H_{9F}**: Drinking style will moderate the relationship between winding down and alcohol consumption. **H_{9G}**: Drinking style will moderate the relationship between hedonism and alcohol consumption. **H_{9H}**: Drinking style will moderate the relationship between confidence and alcohol consumption. **H_{10A}:** Social Connectedness will moderate the relationship between competition and alcohol consumption. **H_{10B}:** Social connectedness will moderate the relationship between copying and alcohol consumption. **H_{10C}:** Social connectedness will moderate the relationship between commitment and alcohol consumption. **H_{10D}:** Social connectedness will moderate the relationship between conformity and alcohol consumption. **H_{10E}:** Social connectedness will moderate the relationship between winding down and alcohol consumption. **H_{10F}:** Social connectedness will moderate the relationship between hedonism and alcohol consumption. **H_{10G}:** Social connectedness will moderate the relationship between confidence and alcohol consumption.

5.8 Conclusion

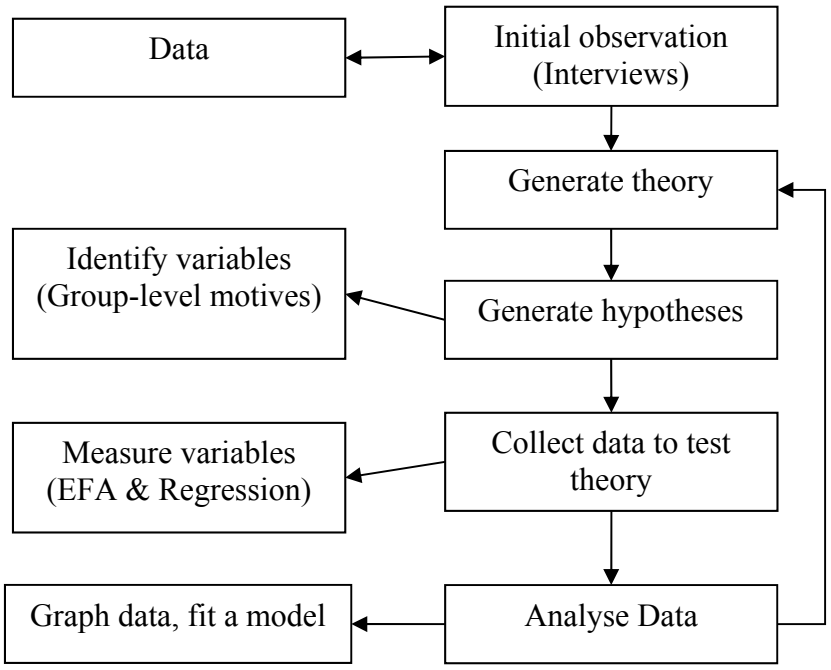
This chapter explored key details of the hypothesised relationships between the independent variables and the dependent variables that were examined in the qualitative study. These relationships will be tested in a quantitative model to determine their ability to affect alcohol consumption.

Chapter 6 Quantitative Study Methodology

6.0 Introduction

Chapter 5 discussed the model development stage and outlined the hypotheses. This chapter will build on the qualitative research and seeks to quantitatively assess the model.

As outlined by Field (2009) and detailed by *Figure 6.1*, the research process uses data in the initial observation to generate theory. Hypotheses are then generated by identifying variables; data is then collected and tested by measuring the variable and, finally, analysed by modelling. This research generated hypotheses from gaps found within the literature, and tested them using exploratory factor analysis and multiple hierarchical regression analysis.



Adapted from: Field, 2009

Figure 6.1. The Research Process

6.1 Pre-testing Survey Process

The pre-testing of a survey, also known as piloting, is an important step in the survey process. Piloting involves the conceptualising and re-conceptualising of the key aims of the study and making preparations for the fieldwork and analysis to reduce problems and possible omissions (Andrews, Nonnecke, & Preece, 2010). Bowden, Rox-Rushby, Nyandieka, and Wanjau (2002) have outlined a number of criteria that can be used to judge the appropriateness of survey questions, and the relevant criteria were used to assess this survey. The criteria are outlined in Table 6.1, with any subsequent changes that were made.

Table 6.1

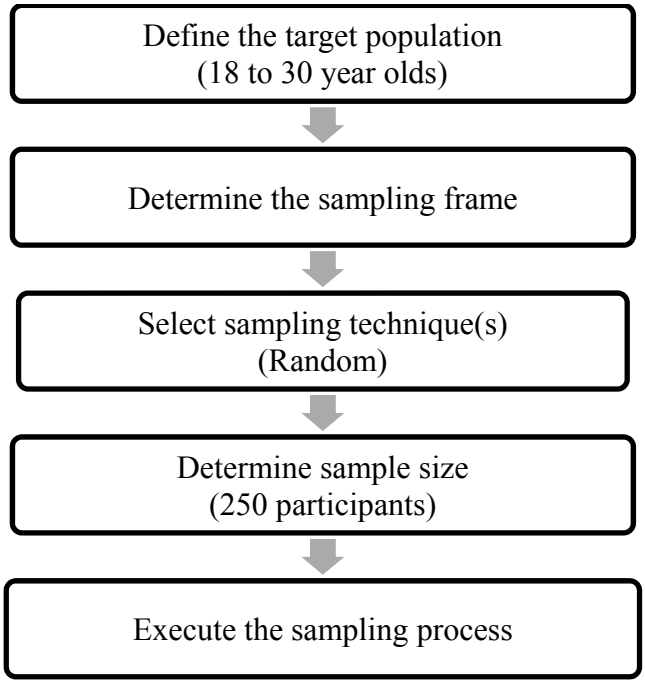
Criteria for Judging Survey Questions

Criteria	Assessment
Remove double-barrelled questions	Checked survey for double-barrelled questions
Language level is not too high/old fashioned/unusual	Some survey items, when reworded for an alcohol context, did not make sense, and so were removed
Question is simple and grammatically correct	Each question was checked for grammatical errors and spelling. Some typos were found and corrected
Question is free from jargon	Jargon was avoided in all questions
Singular and plural 'you' is clear	Because group-level constructs are being measured as well as some individual-level constructs (such as demographics) it was important to have clear boundary conditions. Therefore, the beginning of every sections of questions would either lead with "Thinking about your friendship group …" or "These questions are about you individually"
Meaning and interpretation of question is clear	The copying question asked about their friend's level of risky drinking. Since risky drinking could have many interpretations, the definition of risky drinking as 4 or more standard drinks was put into the online survey
Question makes sense to everyone	People from different education levels read the questions and understood them all
Time period is clear	In order to capture and measure alcohol consumption correctly with the graduated frequency, a time frame had to be set for the participants to refer to. As such, the last 4 weeks was given as a time frame

Source: Bowden et al., 2002

6.2 Sampling Process

The sampling process is now detailed, with Figure 6.2 showing the process. The target population is the collection of elements or objects that possess the information sought by the researcher and about which inferences are to be made (Malhotra, Hall, Shaw, & Oppenheim, 2006). The target population in this sample was young adults who consume alcohol within Australia. Although various operational definitions exist, young adults were defined here as those above the age of 18 and below the age of 30. The floor limit of 18 was selected because it captures participants at the age where alcohol consumption is legal within Australia (Liquor Licensing Act 1997). The ceiling limit of 30 was selected because it represents a time when major life events (such as marriage, mortgages and children) typically occur and these can impinge on excessive alcohol consumption (Measham, Williams, & Aldridge, 2011).



Adapted from: Malhotra et al., 2006

Figure 6.2. Sampling Process

The sampling frame is some representation of the respondents, usually in the form of some list, such as a telephone book, mailing list, city directory or map (Babbie, 2011). The sampling frame used here was a convenience sample national list of email addresses gathered by Australia Post.

Initial sample sizes have to be much larger than traditionally offline surveys, because, typically, the incidence rates and completion rates are less than 100%. It is estimated that the response rate in the web survey, on average, is approximately 11% lower than that of other survey modes (Manfreda, Bosnjak, Berzelak, & Vehovar, 2008). Here, the desired sample size was 250. This research used email, which is known to have low response rates (Fan & Yan, 2010) and thus, a large initial sample needed to be emailed. To this end, 5,500 email addresses were emailed a link to the survey. A 5% response rate allowed a total of 275 responses to be gathered. As females are more likely to complete the surveys than males, the number of male participants emailed was more than female participants. The potential dropout points are detailed in *Figure 6.3*.

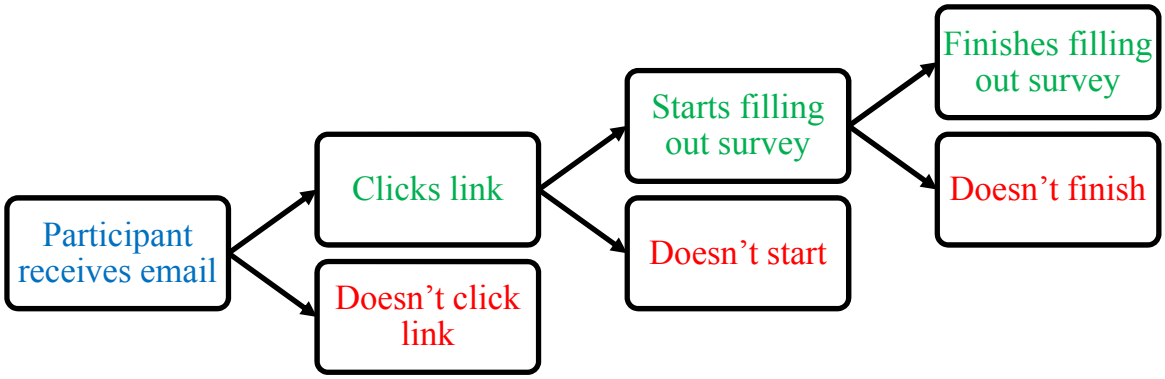
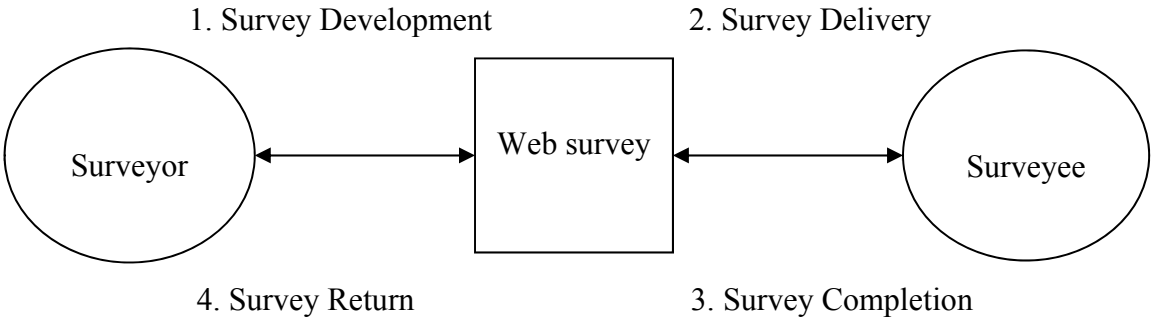


Figure 6.3. Diagram of Potential Survey Participant Dropout Points

6.3 Factors Affecting Response Rates in Web Survey Process

As outlined by Fan and Yan (2010), there are a number of issues that affect the response rate of web surveys. Fan and Yan (2010) proposed four steps in the web survey process, where these issues occur: (1) the survey development, the process in which surveyors design and develop a web survey and upload it to the survey website; (2) the survey delivery, which concerns the process in which surveyors develop a sampling method, contact potential participants and deliver the web survey into the hands of each surveyee; (3) the survey completion, where surveyees receive the survey announcement, log into the survey website, complete and submit the survey and log out of the website; and (4) the survey return, which is where the survey data is downloaded from the web, ready for data analysis. Each step is shown in *Figure 6.4*.



Adapted from: Fan & Yan 2010

Figure 6.4. The Web Survey Process

6.3.1 Survey Development

Survey development focuses on two main factors: the content of web questionnaires and the presentation of web questionnaires. In terms of the content of the web questionnaire, response rate is closely related to who the sponsors are, topic salience and the actual length of the survey itself (Fan & Yan, 2010). Sponsorship of the surveys sets up the broader social context for surveys and it has been found that academic and government agencies have higher response rates than commercial firms (Walston, Lissitz, & Rudner, 2006). As this survey was sponsored by Queensland University of Technology, the university logo was predominately displayed on the survey.

Topic salience (or topic interest) influences response rates (Groves, Ciadini, & Couper, Understanding the decision to participate in a survey, 1992) with highly-interested participants more likely to respond to the survey (Dillman, Mail and Internet Surveys: The tailored design method, 2007). As alcohol consumption is a topic continuously featured in the media and the majority of Australians are alcohol consumers, interest in this topic was likely to be above moderate. Finally, the length of a survey has a negative linear relationship with response rates (Cook, Heath, & Thompson, 2000). As such, this survey was kept to a maximum of 15 minutes in length. This is close to the guideline of 13 minutes, identified by Asiu, Antons, & Fultz (1998).

The presentation of web questionnaires relates to question writing, question ordering and visual display of the web questionnaire (Fan & Yan, 2010). Basic principles (such as keeping questions simple and avoiding biased and vague questions) apply here (Dillman & Smyth, 2007). Preceding questions can affect how potential respondents consider and evaluate the latter questions (Couper, Conrad, & Tourangeau, 2007); this question ordering effect still needs to be investigated empirically for web-based research to guide web survey design (Fan & Yan, 2010). However, careful examination and pilot-testing of the survey were undertaken to counteract any mistakes and identify any strange occurrences, with regards to ordering effects.

6.3.2 Survey Delivery

Survey delivery involves delivering the survey into the hands of potential respondents. The survey invitation contains various kinds of information, such as the organisation's name, title, URL link to the survey, explanation of the proposer and the use of the survey (Crawford, 2006). The design of invitations had two main issues: personalisation and the mention of scarcity. Personalisation of email invitations has been found to have insignificant effects on response rates (Pearson & Levine, 2003) and has even been shown to attract more socially desirable answers to sensitive questions (Heerwegh, Vanhove, Matthijs, & Loosveldt, 2005). As, such salutations, names, and any identifying information will not be used when contacting participants.

Scarcity involves telling the participant they are among the small, selected group to be chosen, or a statement that highlights the deadline for participating in the survey is approaching; both have been found to increase response rates (Porter & Whitcomb, 2003). Therefore, it was mentioned in the email invitation that participants had been specially selected to participate in this research. Reminders have also been found to increase response rates (Bosnjak, Neubarth, Couper, Bandilla, & Kaczmire, 2008), with a first reminder delivered two days after the initial invitation having more positive effect than when delivered after five days (Crawford, Couper, & Lamias, 2001). Thus, after two days, a reminder message was sent to those participants who had yet to respond.

6.3.3 Survey Completion

Some main theories are used to explain and predict the process of participation decisions: mainly social exchange theory and leverage-salience theory. Social exchange theory suggests that respondents are more likely to respond when the respondent trusts that the expected rewards will outweigh the anticipated costs (Dillman, 2007). Here, the cost was the time the respondent gave up in exchange for the reward of an incentive. The survey was short and the reward adequate to help increase response rates. Leverage-saliency theory proposes that individuals assign different weights to different aspects of a survey request (Groves, Singer, & Corning, 2001).

6.3.4 Survey Return

The return of survey data is usually fully automated and, compared to mail surveys, is less data entry intensive. Data downloaded directly from the survey website is normally ready for immediate data analysis in SPSS, after cleaning (Fan & Yan, 2010). As suggested by Fan and Yan (2010), data safety issues were checked and a pilot study was undertaken to see how well the format of the collected survey data could be directly used for data analysis.

6.4 Group-Level Measures and Timing

Attempts to understand alcohol consumption have frequently been focused at an individual level of analysis. For example, Kuntsche et al.'s (2005) motives for alcohol consumption are measured at an individual level. In Kuntsche et al.'s (2005) scale items, the wording of the question is as follows: "In the last 12 months, how often did you drink because you like the feeling?" This focus on the individual level of analysis has been – and should continue to be – fruitful in terms of understanding these motives. However, some of these motives may be further understood by investigating their occurrence at higher levels of analysis, such as the friendship group. As we know, risky drinking is more likely to occur in a friendship group context (Seaman & Ikegwuonu, 2010) and, as such, more focus should be cast upon this context. Attempting to understand individual-level behaviour or attitudes in the

absence of group contexts known to influence those behaviours or attitudes can severely handicap one's ability to explicate the underlying processes of interest (Heck, Thomas, & Tabata, 2010). Therefore, this research used group-level measures to assess these group motives. For example, the wording of questions began with statements such as, "We like to …" and "The group drinks to …"

Timing

The data was chosen to be collected throughout December 2013. The December period is the holiday season and usually entails alcohol consumption with friends. Also known as the "silly season", this is when most Australians celebrate Christmas and New Year's Eve. It has been noted that consumption of various types of alcohol spikes during this time period: spirits, sparkling wines, and champagnes, especially (Roy-Morgan, 2013).

6.5 Survey Design and Measures

The survey measures are shown in Table 6.2. The dependent variable was alcohol consumption, with the rest of the measures forming independent variables or moderators. Items shown in bold were discarded because they were either too confusing or not relevant to alcohol consumption. For instance, in the play scale the item "During the trip, I felt the excitement of the hunt" was not used because it did not easily fit with alcohol consumption even when you change "during the trip" to "during drinking".

Table 6.2

Construct Measures Overview

Variables	Dependent/ independent variable / moderator	Scale name	Items	Author/s	Reliability **(α)**	Type of scale used
Alcohol consumption	DV	Graduated frequency method	10	Sobell & Sobell (2004)	NA	Continuous scale
Competition	IV	Work and Family Orientation Scale (WOFO)	5	Helmreich & Spence (1978)	.76	Likert scale
Copying	IV	Differential	6	Higgins,	.97	Likert scale

Variables	Dependent/ independent variable / moderator	Scale name	Items	Author/s	Reliability **(α)**	Type of scale used
		association		Fell & Wilson (2006)		
Commitments	IV	Characteristics of responsible drinking survey (CHORDS)	5	Barry & Goodson (2011)	.87	Likert scale
Conformity	IV	Drinking motives questionnaire – revised (DMQ-R)	5	Grant et al., (2007)	.81	Likert scale
Winding down	IV	Leisure Motivation Scale (LMS)	12	Beard & Ragheb (1983)	.96	Likert scale
Hedonism	IV	Hedonic and utilitarian shopping scale	10	Babin, Darden, Griffin (1994)	.93	Likert scale
Confidence booster	IV	Consumer self-confidence	10	Veale & Quester (2007)	.75	Likert scale
Social connectedness	MV	Social connectedness scale	8	Lee & Robbins (1995)	.91	Likert scale

6.5.1 Alcohol Consumption

Alcohol usage was measured using the graduated frequency (GF) method. Developed in the 1970s, it has been used in various surveys measuring alcohol intake. The GF measure was chosen over others because it has a higher sensitivity, allows data to be collected without trained interviewers and in a small amount of time, and is more effective in capturing episodes of very high consumption (Rehm et al., 1999; Sobell & Sobell, 2004). The approach asks respondents how often during the designated reference period (e.g. a year) they drank various quantities of alcohol. A psychometric evaluation conducted by Sobell and Sobell (2004) demonstrated that this measure had content, criterion and construct validity. A standard drinks guide, as shown in *Figure 6.5*, helps respondents categorise their drinks into standard drink servings. The GF works by asking the respondents "during the last month how often did you have [*quantity*] of any kind of alcoholic beverage, in a single day?" and

changes the quantity amount for each of the six questions, ranging from 20 or more, to two or one drink(s).

Source: (NHMRC, 2015)

Figure 6.5. Standard Drinks Guide

Table 6.3

Coding Table

Frequency ranges		Quantity ranges	
Option	**Coded as**	**Option**	**Coded as**
Every day or nearly everyday	30	≥ 20	21
3-4 times a week	16	11-19	15
Once or twice a week	8	7-10	8.5
1-3 times a month	3	6-5	5.5
Once in the past month	1	4-3	3.5
Never	0	2-1	1.5

The coding table, shown in Table 6.3, was then used to determine the amount of alcohol consumed for the month. Each of the quantity ranges was multiplied by the selected frequency range and summated, leaving a total score for monthly alcohol consumption.

6.5.2 Competition Amongst Group Members

Competition was measured by the competiveness subscale of the Work and Family Orientation Scale developed by Helmreich and Spence (1978). It contained five items that defined competition as "the desire to win in interpersonal situations" (Helmreich & Spence, 1978, p. 4). This scale had a Cronbach alpha of .76. This scale used a 5-point continuum, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The total score was calculated by averaging the results from the five items. The lead-in question for these items was: "Thinking about your friendship group that you drink with the most, answer the following questions with regards to that group." The items were modified to reflect a group-level construct. The original and modified items are shown in Table 6.4, with bold words showing the group-level adjustment.

Table 6.4

Scale Items for Competition

Original items	Modified items
I enjoy working in situations involving competition with others.	**We** enjoy working in situations. involving competition with others
It is important to me to perform better than others on a task.	It is important to **us** to perform better than others on a task.
I feel that winning is important in both work and games.	**We** feel that winning is important in both work and games.
It annoys me when other people perform better than I do.	It annoys **us** when other people perform better than **we** do.
I try harder when I'm in competition with other people.	**We** try harder when **we are** in competition with other people.

6.5.3 Copying

Copying was measured using the differential association scale developed by Higgins, Fell, & Wilson (2006). Six items were used in this scale, with Cronbach alpha ranging from .97 to .98. The answer format for the scale items ranged from none, just a few, about half, more than half – to all or almost all. The original and modified items are shown in Table 6.5. Past research has indicated that this scale is uni-dimensional as demonstrated by a factor analysis and scree test (Wolfe & Higgins, 2009). The items were reworded to reflect risky drinking, rather than digital piracy. The total score was calculated by averaging the results from the six items. These questions also had a lead-in statement to make sure all participants were aware what the actual definition of risky drinking was: "Risky drinking is defined by the Australian Government as 4 standard drinks or more in one sitting."

Table 6.5

Scale Items for Copying

Original items	Modified items
How many of your best *male* friends copied software in the last 12 months without paying for it?	How many of your best male friends **drank at risky levels** in the last 12 months?
How many of your *male* friends that you have known the longest have copied software without paying for it in the last 12 months?	How many of your male friends that you have known the longest **drank at risky levels** in the last 12 months?
How many of your *male* friends whom you are around the most copied software in the last 12 months without paying for it?	How many of your male friends whom you are around the most **drank at risky levels** in the last 12 months?
How many of your best *female* friends copied software in the last 12 months without paying for it?	How many of your best female friends **drank at risky levels** in the last 12 months?
How many of your *female* friends that you have known the longest have copied software without paying for it in the last 12 months?	How many of your female friends that you have known the longest **drank at risky levels** in the last 12 months?
How many of your *female* friends whom you are around the most copied software in the last 12 months without paying for it?	How many of your female friends whom you are around the most **drank at risky levels** in the last 12 months?

6.5.4 Commitments

The characteristics of responsible drinking survey (CHORDS) was used to measure commitments that are likely to affect alcohol consumption. The CHORDS was the first instrument specifically designed to assess responsible drinking beliefs and behaviours. Five dimensions, including behaviour belief, motivation, self-efficacy, barriers, and behavioural intentions, are measured. However, for this research, only one dimension was utilised: motivations. Motivations to consume responsibly included personal obligation and responsibility, which could be school- or work-related. The internal reliability for this survey was .87. For each item, respondents indicated whether given conditions/situations served as a potential motivator for drinking responsibly: (1) never; (2) seldom; (3) some of the time; (4) most of the time; or (5) always. The total score was calculated by averaging the results from the five items. The original and modified questions are shown in Table 6.6.

Table 6.6

Scale Items for Commitments

Original items	Modified question
When I drink responsibly, one of my motivations is ...	**When we drink responsibly, one of our motivations is ...**
... because I have to drive myself home	I have to drive myself home
... because of my work-related responsibilities	My work-related responsibilities
... because I am the designated driver	I am the designated driver
... because I have to get up early in the morning for class	I have to get up early in the morning for class
... because I need to study for a test or complete my school work	I need to study for a test or complete my school work

6.5.5 Conformity

Conformity was one of five motives or reasons for drinking, as explored by Grant, Stewert, O'Connor, Blackwell, and Conrod (2007). Conformity refers to trying to fit with an admired group or to avoid peer rejection (Grant et al., 2007). Cooper (1994) found that each of these types of motives for alcohol use was associated with a unique pattern of concurrent alcohol use and alcohol-related problems, even after accounting for basic demographic differences. Conformity motives were negatively associated with quantity and frequency of alcohol use and heavy drinking, but positively related to drinking problems (Grant et al., 2007). The Cronbach alpha was .81. Likert scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) were used. The total score was calculated by averaging the results from the five items. The original and modified items are shown in Table 6.7.

Table 6.7

Scale Items for Conformity

Original items	Modified items
To be liked	**We drink** to be liked
So that others won't kid me about not using	**We drink** so others won't make fun of us
Because my friends pressure me to use	**We drink** because others pressure us to
To fit in with a group I like	**We drink** to fit in
So I won't feel left out	**We drink** so we won't feel left out

6.5.6 Winding down

Winding down was measured using the Leisure Motivation Scale (LMS) which is used to assess the psychological and sociological reasons for participation in leisure activities (Beard & Ragheb, 1983). This scale was first developed by Beard and Ragheb in 1983. Four subscales were derived from their factor analysis: intellectual, social, competence mastery, and stimulus-avoidance. The stimulus-avoidance subset of the LMS was used to measure winding down motivation for alcohol consumption. The instrument was previously administered to 1,205 participants and the internal consistency reliability of the subscales was approximately .90 (Beard & Ragheb, 1983). Likert scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) were used. The total score was calculated by averaging the results from the 11 items. The sentence that is completely bold in the Table 6.8 means that it was not used in the final questionnaire. The original and modified items are shown in Table 6.8.

Table 6.8

Scale Items for Winding Down

Original items	Modified items
To be in a calm atmosphere	**We drink** to create a calm atmosphere
To avoid crowded areas	**We drink** to avoid crowded areas
To slow down	**We drink** to slow down
Because I like to be alone	**We drink** to be alone
To relax physically	**We drink** to relax physically
To relax mentally	**We drink** to relax mentally
To avoid the hustle and bustle of daily activities	**We drink** to avoid the hustle and bustle of daily activities
To rest	**We drink** to rest
To relieve stress and tension	**We drink** to relieve stress and tension
To do something simple and easy	**We drink** to do something simple and easy
To un-structure my time	**We drink to un-structure our time**
To get away from the responsibilities of everyday life	**We drink** to get away from the responsibilities of everyday life

Note: Items that are all in **Bold** were removed from the survey

6.5.7 Hedonism

The scale to measure hedonism was the hedonic and utilitarian shopping scale developed by Babin, Darden & Griffin, in 1994. The hedonic subsection was used to measure the hedonic aspect of alcohol consumption. The scale was initially used to assess consumers' evaluations of a shopping experience along two important dimensions: utilitarian and hedonic value. Hedonic value is more subjective and personal than its utitialrian counterpart and results more from fun and playfulness, rather than from task completion (Holbrook & Hirschman, 1982). Increased arousal, heightened involvement, perceived freedom, fantasy fulfilment and escapism may all indicate a hedonically-valuable shopping experience (Bloch & Richins, 1983). Likert scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) were used. Past research revealed internal reliability to be .93. The total score was calculated by averaging the results from the seven items. The sentences that were completely in bold were not used in the final questionnaire. The original and modified items are shown in Table 6.9.

Table 6.9

Scale Items for Hedonism

Original items	Modified items
1. This shopping trip was truly a joy	**Drinking as a group is** truly a joy
2. I continued to shop, not because I had to, but because I wanted to	We continue to **drink**, not because we had to, but because we wanted to
3. This shopping trip truly felt like an escape	**Drinking** with my group truly feels like an escape
4. Compared to other things I could have done, the time spent shopping was truly enjoyable	Compared to other things I could have done, the time spent **drinking with friends** is truly enjoyable
5. I enjoyed being immersed in exciting new products	**I enjoyed being immersed in exciting new products**
6. I enjoyed this shopping trip for its own sake, not just for the items I may have purchase	**I enjoyed this shopping trip for its own sake, not just for the items I may have purchase**
7. I had a good time because I was able to act on the "spur-of-the-moment"	**We** had a good time because **we** were able to act on the "spur-of-the-moment"
8. During the trip, I felt the excitement of the hunt	**During the trip, I felt the excitement of the hunt**
9. While shopping, I was able to forget my problems	While **drinking with friends**, **we** were able to forget **our** problems
10. While shopping, I felt a sense of adventure	While **drinking with friends**, **we** felt a sense of adventure

Note: Items that are all in **Bold** were removed from the survey

6.5.8 Confidence Booster

Consumer self-confidence (Veale & Quester, 2007) was used to measure the confidence booster aspect of drinking. High levels of personal self-confidence are thought to empower consumers to act on their personal beliefs, regardless of their basis or accuracy. Conversely, those with low levels of confidence tend to be more reliant on the opinions of others or the perceptions of extrinsic cues (Veale & Quester, 2007). The internal reliability was found to be .75. The response format was 5 (*strongly agree*) to 1 (*strongly disagree*). The total score was calculated by averaging the results from the seven items. The sentences that are completely in bold were not used in the final survey. The original and modified items are shown in Table 6.10.

Table 6.10

Scale Items for Confidence Booster

Original items	Modified items
1 I feel capable of handling myself in most social situations	**When we drink we** feel capable of handling ourselves in most social situations
2 I seldom fear my actions will cause others to have a low opinion of me	**When we drink we** seldom fear our actions will cause others to have a low opinion of us
3 It doesn't bother me to have to enter a room where other people have already gathered and are talking	**When we drink** it doesn't bother us to have to enter a room where other people have already gathered and are talking
4 (R) In group discussions I usually feel my opinions are inferior	**When we drink we** usually feel our opinions are inferior
5 (R) I don't make a very favourable first impression on people	**When we drink we** don't make a very favourable first impression on people
6 (R) When confronted by a group of strangers, my first reaction is always one of shyness and inferiority	**When confronted by a group of strangers, our first reaction is always one of shyness and inferiority**
7 (R) It is extremely uncomfortable to accidentally go to a party wearing the wrong thing	**When we drink it is extremely uncomfortable to accidentally go to a party wearing the wrong thing**
8 I don't spend much time worrying about what people think of me	**When we drink we** don't spend much time worrying about what people think of us
9 (R) When in a group, I very rarely express an opinion for fear of being laughed at	**When we drink we very rarely express an opinion for fear of being laughed at**
10 I am never at a loss for words when I am introduced to someone I don't know	**When drinking as a group we are** never at a loss for words when we're introduced to someone we don't know

Note: Items that are all in **Bold** were removed from the survey. R = Reverse coded.

6.5.9 Social Connectedness

The social connectedness scale was made up of three aspects: connectedness, affiliation and companionship. The items portrayed a general emotional distance between self and others that may be experienced even among friends or close peers (Lee & Robbins, 1995). People in strong agreement with these scale items are believed to have been frustrated from not receiving appropriate empathy or understanding from peers or society along the transition from adolescence to adulthood. These people typically exhibit narcissistic personality disorders and narcissistic character traits (Wolf, 1988). The rating system ranged from 1 (*agree*) to 6 (*disagree*). Thus, lower scores reflected a more reported sense of social connectedness. Internal items consistency was high for these eight items ($\alpha = .91$). The total score was calculated by averaging the results from the eight items. The original items and items used in the survey are shown in Table 6.11.

Table 6.11

Scale Items for Social Connectedness

Original items	Items used in the survey
I feel disconnected from the world around me	I feel disconnected from the world around me
Even around people I know, I don't feel that I really belong	Even around people I know, I don't feel that I really belong
I feel so distant from people	I feel so distant from people
I have no sense of togetherness with my peers	I have no sense of togetherness with my peers
I don't feel related to anyone	I don't feel related to anyone
I catch myself losing all sense of connectedness with society	I catch myself losing all sense of connectedness with society
Even among my friends, there is no sense of brother/sisterhood	Even among my friends, there is no sense of brother/sisterhood
I don't feel I participate with anyone or any group	I don't feel I participate with anyone or any group

6.5.10 Demographic Questions

Five demographic questions were asked of respondents: (1) When drinking with your friendship group does it mostly consist of all males, mostly males, a mixture of females and males, mostly females or all females?; (2) What year were you born?; (3) What is your gender?; (4) What is your income before taxes?; and (5) What is your highest level of educational attainment? These questions were asked as they have been identified in previous literature as relevant variables for alcohol research (Christiansen & Golden, 1983).

6.6 Exploratory Factor Analysis

Exploratory factor analysis (EFA) is considered the method of choice for interpreting self-reporting questionnaires (Byrant, Yarnold, & Michelson, 1999). The objective of EFA is to reduce the number of variables, examine the structure or relationship between variables, detect and assess unidimensionality of the theoretical construct, and evaluate the construct validity of a scale (Williams, Onsman, & Brown, 2010). The extraction method selected was maximum likelihood. Maximum likelihood "allows for the computation of a wide range of indexes of the goodness of fit of the model [and] permits statistical significance testing of factor loadings and correlations among factors and the computation of confidence intervals" (Fabrigar, Wegener, MacCallum, & Strahan, 1999, p. 277). The next stage was the selection of the rotation. The goal of rotation is to simplify and clarify the data structure (Williams, Onsman, & Brown, 2010). Direct oblimin was selected as the rotation method. Direct oblimin is an oblique rotation: "…oblique rotation should theoretically render a more accurate, and perhaps more reproducible, solution [compared with orthogonal techniques]" (Costello & Osborne, 2005, p. 3). Cronbach alpha and the Guttman test were used to assess internal reliability. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were used to assess the suitability of the respondent data for factor analysis. KMO with a level above .50 is considered suitable for factor analysis, and the Bartlett's test of sphericity should be significant for factor analysis to be suitable (Williams, Onsman, & Brown, 2010). All factors with eigenvalues greater than 1.0 were retained. Scale items with factor loadings below 4.0 were removed.

6.7 Multiple Hierarchical Regression and Moderated Regression

Both multiple hierarchical regression and moderated regression were used as analysis techniques. Multiple hierarchical regression is a way of predicting an outcome variable from several predictor variables with the addition of control variables (Field, 2009). Here, the researcher used the group-level alcohol motives to determine their role in regards to alcohol consumption, whilst controlling for gender and age. This helped determine which motives were statistically significant associations of alcohol consumption and which ones were stronger than others. Moderated regression is when the effect of a predictor variable (X) on an outcome variable (Y) depends on a third variable (M). As shown in *Figure 6.6* this moderation effect is synonymous with interaction effect. All the variables and their relationships are shown in Table 6.12.

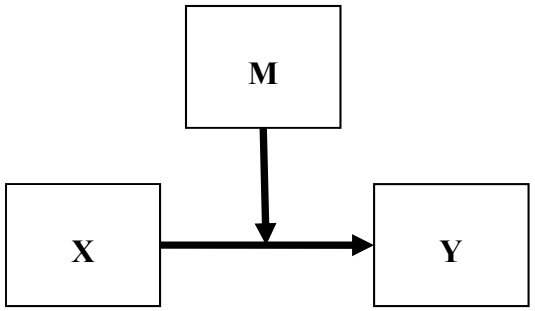


Figure 6.6. The Moderator Effect

Table 6.12

Variables and Their Relationships

Predictor variables	Control variables	Moderator variables	Outcome variable
Competition	Gender	Group gender composition	Alcohol consumption
Copying	Age	Drinking occasion	
Commitments		Social connectedness	
Conformers			
Winding down			
Hedonists			
Confidence booster			

Moderation analysis was undertaken as part of research: RQ2b Do friendship group features moderate the relationship between motives and alcohol consumption? Specifically the analysis investigated the effect of group gender composition, drinking occasion and social connectedness following the protocol of Hayes (2013). The first step was to check that the sample size was appropriate for the analysis. Using Tabachnick and Fidell's (2001) Sample Size and Statistical Power in Tests of Moderation, the criteria for a minimum sample size must be $N > 50 + 8k$, where k is the number of predictor variables. The predictor variables included a) all the group-level motives, b) all the interaction terms between the moderators and the group-level motives, and c) all the moderators; thus the minimum sample size required for this research was: 50 + 8 * [7 + (7* 3) +3] = 298. As 298 is 46 above the sample size of 252, moderation analysis including all variables could not be conducted with an appropriate level of statistical power. Therefore the moderation analysis was conducted on the effect of individual moderators on the relationship between motives and alcohol consumption, and included testing for interaction effects amongst the moderators. Using the PROCESS plugin in SPSS (Hayes, 2013) each group-level motive was assessed against each moderator. The options of "mean centering" and "generate data for plotting graph" were checked. The results are detailed in sections 7.8 to 7.10.

The second step was to assess the relationship between group level motives and alcohol consumption. This was done by regressing all the group-level motives onto alcohol consumption (Hayes, 2013). Moderation examines the interactive effects of predictor variables on an outcome variable (Hayes, 2013).

6.8 Conclusion

This chapter has examined the research process and sampling process. The response rate issues relating to web surveys were detailed and discussed. Group-level measurement and timing were then detailed, followed by an explanation of survey design and each measure which was assessed. Lastly, the analysis methods were detailed, specifically exploratory factor analysis and multiple hierarchical regression analysis.

Chapter 7 Results and Analysis for Quantitative Study

7.0 Introduction

The previous chapter discussed the methodology for the quantitative study. It discussed sampling methodology, measurement issues, survey design and measures. This chapter will outline the results of the tests for reliability and validity. This chapter is organised as follows. Firstly, the preliminary analysis of the data was conducted; this involved data preparation, treatment of missing data, identification and examination of outliers, assessment of normality and multicollinearity. Secondly, the sample characteristics are shown and discussed. Thirdly, exploratory factor analysis and reliability analyses were conducted on each construct. Fourthly, a hierarchical multiple regression was performed. Finally, the chapter concludes.

7.1 Preliminary Analysis

Preliminary analysis of the data was conducted, prior to analysis. Following Field's (2009) procedure this involved preparation of the data, treatment of the missing data, identification and examination of outliers and their potential impact, assessment of normality and assessment of multicollinearity as detailed below. A total of 5,500 participants were emailed; the number who completed the survey was 277. This represents a response rate of 5.04% which is common for online survey data (Kaplowitz, Hadlock, & Levine, 2004). The click-through rate (the number of people who clicked that link to the survey) was 511, meaning 234 people left the survey before completing it. It is unknown how many of the questions these participants completed, but it is possible that they found the first set of questions about alcohol consumption hard to understand and thus, left the survey prematurely.

7.1.1 Data Preparation

Items that were reverse-coded were reverse-scored using SPSS's compute function. Out-of-range response and mean scores were checked using frequencies and distributions graphs. The output showed that none of these errors were in the data. If a respondent answered "never" to all the alcohol consumption questions, they were removed from the survey, as this meant they did not consume alcohol in the designated time period. Additionally, any responses that fell outside of the 18- to 30-year-old categories were also removed, as these responses were considered to be outside of the young adult grouping. A total of 20 respondents were removed based on these criteria, leaving 257 for the next stage of data treatment.

7.1.2 Treatment of Missing Data

As the web survey required the participants to answer questions before they moved on to the next question, all participants who completed the survey had no missing data. Missing data checks were therefore not required in the current study.

7.1.3 Identification and Examination of Outliers

Outliers represent observations with a unique combination of characteristics identifiable as distinctly different from other observations (Hair, Black, Babin, & Anderson, 2010). Four classes of outliers can be classified based on their source of uniqueness: (1) outliers that arise from procedural error, such as incorrect data entry or a mistake in coding; (2) the observation occurs as a result of an extraordinary event, which accounts for the uniqueness of the observation; (3) outliers that comprise extraordinary observations for which the researcher has no explanation; and (4) outliers containing observations that fall within the ordinary range of values on each of the variables. These observations are not particularly high or low on the variables, but are unique in their combination of values across variables. These types of outliers and procedures to remedy them are shown in Table 7.1.

Table 7.1

Types of Outliers

Types of outlier	Procedure
Procedural error	Should be identified in the cleaning stage, but if overlooked should be eliminated or recorded as missing
Extraordinary event	Decide if the extraordinary event fits the objective of the research. If so, the outlier should be retained; if not, it should be deleted.
Extraordinary observations	Most likely to be omitted, but may be retained if the researcher feels they represent a valid element of the population.
Unique in their combination of values across variables	Outliers should be retained unless specific evidence is available that discounts the outlier as a valid member of the population.

Adapted from: Hair et al., 2010

All variables were checked using box and whisker plots; alcohol consumption was the only variable to have outliers. These outliers were identified by converting data values into standard *z* scores, in accordance with Hair, Black, Babin, Anderson, and Tatham (2006). Any *z* score that exceeded ±3.0 was identified as being an outlier. Five respondents were removed based on this criterion, leaving a total of 252 for analysis.

7.1.4 Assessment of Normality

Normality was assessed by examining skewness and kurtosis. A distribution is said to be normal when the values of skewness and kurtosis are equal to zero (Tabachnick & Fidell, 2001). As defined by Chou and Bentler (1995), values of skewness exceeding 3.0 were deemed problematic. For kurtosis, values greater than 10 suggest a problem, with a value greater than 20 indicating a more serious issue (Hoyle, 1995; Kassim, 2001; Kline, 1998). Using SPSS, values were assessed for their skewness and kurtosis. Results revealed normal distribution for all variables. However, alcohol consumption had a skewness of 3.0 and a kurtosis of 10, suggesting it was close to non-normal. This non-normal data was consistent with other alcohol consumption studies (Grittner, Gmel, Ripatti, Bloomfield, & Wicki, 2011). In order to remedy this, a logarithmic transformation was performed. This changed the skewness value to -.21 and the kurtosis value to -.49; acceptable limits required for normality of data.

Typically log transformations are used to achieve a normal distribution in the data; this allows the data to be tested using parametric statistical tests rather than non-parametric ones (Sedgwick, 2012). If such an approach is preferred, it is important to be mindful about its ramifications and, in particular, its interpretations with respect to the study goal and data (Feng, Wang, Lu, & Tu, 2012). It should be recognised that conclusions drawn on transformed data do not always transfer neatly to the original measurements (Howell, 2007). Although it may appear as a way of manipulating data to get the desired result, a logarithmic scale is simply an alternative means of representing data originally measured on a linear scale (Sedgwick, 2012). The log transformation, while nonlinear, is monotonic; that is, the order of data values after transformation is the same as before (Quinn & Keough, 2002). The aim of this type of transformation is to make the data and model error terms close to a normal distribution, and to reduce the relationship between the mean and variable which improves homogeneity of variances (Quinn & Keough, 2002). An added benefit about most of the transformations is that when we transform the data to meet one assumption, we often come closer to meeting other assumptions as well (Howell, 2007). Howell (2007, p. 320) writes that "it is not uncommon to see both the converted and unconverted values reported" and as such both are reported in the results.

7.2 Sample Characteristics

The sample characteristics are shown in Table 7.2. The age of the sample ranged between 18 and 30, with a mean age of 26. A discrepancy was noted in the ratio of males to females, with the number of males totalling 21% and females 79%. The majority (38.9%) of the sample had obtained a university undergraduate degree. This is higher than the national average of 27%, which indicates an educated sample (ABS, 2011). Income ranged from $0 to over $100,000, with the majority (25%) earning $40,000 to $59,999. Drinking style was found to be 40% weekly and 60% celebratory. Lastly, the gender of the friendship groups as a whole ranged from all-male to all-female. However, the vast majority (67%) had a mixture of both females and males.

Table 7.2

Descriptive Characteristics of the Sample

Variable	Responses	Total number	Percentage %
Gender	Male	54	21.4%
	Female	198	78.6%
	Total	**252**	**100%**
Age	18	1	.4%
	19	11	4.4%
	20	5	2.0%
	21	10	4.0%
	22	10	4.0%
	23	25	9.9%
	24	14	5.6%
	25	25	9.9%
	26	21	8.3%
	27	26	10.3%
	28	42	16.7%
	29	31	12.3%
	30	31	12.3%
	Total	**252**	**100%**
Education	High School	28	11.1%
	TAFE	60	23.8%
	Some University	37	14.7%
	University Undergraduate Degree	98	38.9%
	University Postgraduate Degree	29	11.5%
	Total	**252**	**100%**
Income	$0-$19,999	49	19.4%
	$20,000-$39,999	53	21.0%
	$40,000-$59,999	63	25.0%
	$60,000-$79,999	60	23.8%
	$80,000-$99,999	21	8.3%
	$100,000 or more	6	2.4%
	Total	**252**	**100%**
Drinking style	Weekly basis	99	39.3%
	Celebratory	153	60.7%
	Total	**252**	**100%**
Friendship group gender	All males	1	.4%
	Mostly males	49	19.4%
	Mixture of males and females	169	67.1%
	Mostly females	29	11.5%
	All females	4	1.6%
	Total	**252**	**100%**

7.3 Comparing Alcohol Consumption Across Groups

Levels of alcohol consumption were compared across various groups to determine if statistical differences existed, as shown in Table 7.3. The minimum consumption for the sample was 1.5 standard drinks, with the maximum being 503 standard drinks. The average consumption for the sample was 57 standard drinks and the median was 26.5 standard drinks, with a mode of 1.5 standard drinks for the past month. Using the average, this indicates around 1.9 standard drinks were consumed each day during the past month. A significant difference existed between males and females: t (62.275) = 3.037, p = .003 (two-tailed). The magnitude of the difference (mean difference = 52.98, 95% CI: 18.11 to 87.86) in the means was relatively small (eta squared = .036) according to Cohen's (1988) guidelines. A significant difference existed between the two drinking styles, weekly and celebratory: t (117.55) = 6.11, p = .000 (two-tailed). The magnitude of the difference (mean difference = 72.5, 95% CI: 49.00 to 96.00) in the means was close to large (eta squared = .13) according to Cohen's (1988) guidelines. No significant differences existed between the friendship gender groups. No significant differences existed between incomes. No significant differences existed between education levels.

Table 7.3

Alcohol Consumption Levels Across Various Groups

Variable	Response	Mean (*SD*)	Significant difference
Gender	Male	98.3 (123.1)	p = .003
	Female	45.3 (68.7)	
Drinking style	Weekly	100.7 (112.6)	p = .000
	Celebratory	28.2 (43.9)	
Friendship group gender	All males	29.5 (0.00)	p = .343
	Mostly males	79.79 (100.55)	
	Mixture of males and females	51.35 (80.67)	
	Mostly females	49.36 (92.5)	
	All females	59 (21.7)	
Income	$0-$19,999	89.71 (12.81)	p = .092
	$20,000-$39,999	46.17 (6.34)	
	$40,000-$59,999	114.15 (14.38)	
	$60,000-$79,999	76.06 (9.81)	
	$80,000-$99,999	28.25 (6.16)	
	$100,000 or more	155.68 (63.55)	
Education	High School	41.50 (60.33)	p = .680
	TAFE	65.15 (103.87)	
	Some University	50.17 (99.13)	
	University Undergraduate Degree	54.68 (66.96)	
	University Postgraduate Degree	69.01 (105.60)	

7.4 Exploratory Factor Analysis (EFA) and Reliability Analysis

The primary goal of EFA is to identify latent factors that explain the covariation among a set of measured variables (Field, 2009). Specifically, EFA explores how many factors exist among a set of variables and the degree to which the variables are related to the factors (Kahn, 2006). The extraction method used was maximum likelihood and the rotation used was oblique specifically direct oblimin. Reliability means that a measure should consistently reflect the construct that it is measuring (Field, 2009). The KMO and Bartlett's test were used to assess the suitability for factor analysis, with the KMO cut-off value being 0.5 and the Bartlett's test needing to be significant. Items with an item-to-total correlation below 0.30 (Field, 2009) were removed and shown in bold; items with a factor loading less than 0.50 were removed and shown in italics (Field, 2009).

The internal consistency measure known as Cronbach's alpha (α) was used to assess the degree to which each construct is reliable (Field, 2009). This measure is loosely equivalent to splitting data into two, in every possible way, and computing the correlation coefficient for each split – thereby determining how well a person's score on half the items in the scale matches their score on the other half (Field, 2009). The acceptable value for Cronbach's alpha is debatable, with Schmitt (1996, p. 354) concluding that "there is no sacred level of acceptable or unacceptable level of alpha. In some cases, measures with (by conventional standards) low levels of alpha may still be quite useful." This research cautiously used the guidelines set out by Hair, Anderson, Tatham, & Black (1998), with 0.7 being the generally accepted lower limit for α, while it may decrease to 0.6 in exploratory research. In addition, further reliability analyses were used, specifically split-half reliability.

7.4.1 Competition

To investigate the underlying structure of a five-item questionnaire assessing competitive motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .86, which was above the threshold of 0.50 (Williams, Brown, & Onsman, 2012). The Bartlett's test of sphericity was significant, making it suitable for factor analysis (Williams et al., 2012). The Cronbach alpha value was .92 and the Guttman split-half coefficient was .85; these values exceeded the accepted standard (Nunnally & Bernstein, 1994) shown in Table 7.5. One factor (with eigenvalues exceeding 1) was identified as underlying the five questionnaire items. In total, these factors accounted for around 71% of the variance in the questionnaire data.

Table 7.4

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.86
Bartlett's test of sphericity	.00

Table 7.5

Competition Exploratory Factor Analysis and Cronbach Alpha

Scale items	Factor loading	Item total	Mean	*SD*
It is important to us to perform better than others on a task	.910	.86	3.62	1.80
We feel that winning is important in both work and games	.886	.83	3.65	1.76
We try harder when we're in competition with other people	.847	.82	4.07	1.75
We enjoy working in situations involving competition with others	.791	.74	3.42	1.82
It annoys us when other people performed better than we do	.760	.72	3.35	1.70
Eigenvalue	3.54			
% of variance explained	70.7			
Cronbach alpha	.92			
Guttman split-half Coefficient	.85			

7.4.2 Copying

To investigate the underlying structure of a six-item questionnaire assessing copying motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .88, which was above the threshold of 0.5 (Williams et al., 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams et al., 2012). The Cronbach alpha value was .97 and the Guttman split-half coefficient was .91; these values exceeded the accepted standard (Nunnally & Bernstein, 1994). One factor (with eigenvalues exceeding 1) was identified as underlying the six questionnaire items (see Table 7.7). In total, these factors accounted for around 83% of the variance in the questionnaire data.

Table 7.6

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.88
Bartlett's test of sphericity	.00

Table 7.7

EFA for Copying and Reliability Analysis

Scale items	Factor loading	Item-total	Mean	*SD*
How many of your male friends who you are around the most drank at risky levels in the last 12 months?	.949	.91	2.45	1.25
How many of your male friends that you have known the longest have drank at risky levels in the last 12 months?	.937	.89	2.56	1.26
How many of your best male friends drank at risky levels in the last 12 months?	.936	.89	2.54	1.26
How many of your best female friends drank at risky levels in the last 12 months?	.891	.90	2.25	1.13
How many of your female friends who you are around the most drank at risky levels in the last 12 months?	.890	. 89	2.24	1.21
How many of your female friends that you known the longest have drank at risky levels in the last 12 months?	.864	.87	2.26	1.17
Eigenvalue	4.99			
% of variance explained	83.1			
Cronbach alpha	.97			
Guttman split-half coefficient	.91			

7.4.3 Commitments

To investigate the underlying structure of a five-item questionnaire assessing commitments which may affect alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .66, which was above the threshold of 0.50 (Williams, Brown, & Onsman, 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams, Brown, & Onsman, 2012). The Cronbach alpha value was .77 and the Guttman split-half coefficient was .56; these values exceeded accepted standard (Nunnally & Bernstein, 1994). Two factors (with Eigenvalues exceeding 1) were identified as underlying the five questionnaire items (see Table 7.9). In total, these factors accounted for around 45% of the variance in the questionnaire data.

Table 7.8

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.66
Bartlett's test of sphericity	.00

Table 7.9

Commitments Exploratory Factor Analysis and Cronbach Alpha

Scale items	Work/ study	Driving	Item total	Mean	*SD*
I have to get up early in the morning for class	.97		.64	2.54	1.33
I need to study for a test or complete my schoolwork	.87		.58	2.33	1.33
My work-related responsibilities	*.41*		*.50*	*3.08*	*1.18*
I have to drive myself home		.89	.47	3.14	1.35
I am the designated driver		.75	.57	2.96	1.33
Eigenvalue	2.24	1.03			
% of variance explained	44.86	20.6			
Cronbach alpha	.77				
Guttman split-half coefficient	.56				

Note: Any scale items in *italics* have been removed from the data analysis

7.4.4 Conformity

To investigate the underlying structure of a five-item questionnaire assessing conformity motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .86, which was above the threshold of 0.50 (Williams et al., 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams et al., 2012). The Cronbach alpha value was .93 and the Guttman split-half coefficient was .91; these values exceeded the accepted standard (Nunnally & Bernstein, 1994). One factor (with eigenvalues exceeding 1) was identified as underlying the five questionnaire items (see Table 7.11). In total, these factors accounted for around 75% of the variance in the questionnaire data.

Table 7.10

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.86
Bartlett's test of sphericity	.00

Table 7.11

Conformity Exploratory Factor Analysis and Cronbach Alpha

Scale items	Factor loading	Item total	Mean	*SD*
We drink to fit in	0.94	.90	2.37	1.77
We drink to be liked	0.87	.84	2.14	1.56
We drink so we won't feel left out	0.86	.81	2.72	1.89
We drink so others won't make fun of us	0.83	.81	1.79	1.33
We drink because others pressure us to	0.82	.78	2.09	1.62
Eigenvalue	3.76			
% of variance explained	75.14			
Cronbach alpha	.93			
Guttman split-half coefficient	.91			

7.4.5 Winding down

To investigate the underlying structure of an eleven-item questionnaire assessing winding down motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .86, which was above the threshold of 0.50 (Williams et al., 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams et al., 2012). The Cronbach alpha value was .88 and the Guttman split-half coefficient was .81; these values exceeded the accepted standard (Nunnally & Bernstein, 1994). Two factors (with eigenvalues exceeding 1) were identified as underlying the 11 questionnaire items (see Table 7.13). In total, these factors accounted for around 52% of the variance in the questionnaire data.

Table 7.12

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.86
Bartlett's test of sphericity	.00

Table 7.13

Winding Down Exploratory Factor Analysis and Cronbach Alpha

Scale items	Relax	Calm	Item total	Mean	*SD*
We drink to relax mentally	0.97		0.65	4.94	1.44
We drink to relax physically	0.81		0.63	4.52	1.64
We drink to relieve stress and tension	0.79		0.63	4.85	1.56
We drink to rest	0.58		0.59	3.73	1.79
We drink to avoid the hustle and bustle of daily activities	0.55		0.68	3.47	1.92
We drink to do something simple and easy	*0.43*		*0.57*	*3.99*	*1.82*
We drink to get away from the responsibilities of everyday life	*0.30*		*0.52*	*3.70*	*1.93*
We drink to avoid crowded areas		0.91	0.56	2.12	1.37
We drink to be alone		0.81	0.49	1.75	1.28
We drink to slow down		0.54	0.52	2.83	1.74
We drink to create a calm atmosphere		0.54	0.61		
Eigenvalue	4.49	1.29			
% of variance explained	40.78	11.68			
Cronbach alpha	.88				
Guttman split-half coefficient	.81				

Note: Any scale items in *italics* have been removed from the data analysis

7.4.6 Hedonism

To investigate the underlying structure of a seven-item questionnaire assessing hedonism motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .85, which was above the threshold of 0.50 (Williams et al., 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams et al., 2012). The Cronbach alpha value was .81 and the Guttman split-half coefficient was .72; these values exceeded the accepted standard (Nunnally & Bernstein, 1994). Two factors (with one having eigenvalues exceeding 1) were identified as underlying the seven questionnaire items (see Table 7.15). In total, these factors accounted for around 60% of the variance in the questionnaire data.

Table 7.14

KMO and Bartlett's Test

Test	Results	Updated Results
Kaiser-Meyer-Olkin	.85	.71
Bartlett's test of sphericity	.00	.00

Table 7.15

Hedonism Exploratory Factor Analysis and Cronbach Alpha

Scale items	Enjoy-ment	Escapism	New factor loading	Item total	Mean	*SD*
Drinking as a group is truly a joy	.874		.84	.70	5.12	1.44
We continue to drink, not because we had to but because we wanted to	.778		.77	.66	5.46	1.33
Compared to other things I could have done, the time spent drinking with friends is truly enjoyable	.655		.7	.62	4.68	1.57
Drinking with my group truly feels like an escape	*.439*	*-.341*			*4.38*	*1.74*
While drinking with friends, we feel a sense of adventure		*-.913*			*4.12*	*1.66*
While drinking with friends, we are able to forget our problems		*-.753*			*4.26*	*1.65*
We have a good time because we were able to act on the "spur-of-the-moment"		*-.628*			*4.22*	*1.64*
New eigenvalue	1.8					
New % of variance explained	60					
Cronbach alpha	.81					
Guttman split-half coefficient	.72					

Note: Any scale items in *italics* have been removed from the data analysis

7.4.7 Confidence Booster

To investigate the underlying structure of a seven-item questionnaire assessing confidence booster motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .77, which was above the threshold of 0.50 (Williams et al., 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams et al., 2012). The Cronbach alpha value was .77 and the Guttman split-half coefficient was .71; these values exceeded the accepted standard (Nunnally & Bernstein, 1994). One factor (with eigenvalues exceeding 1) was identified as underlying the seven questionnaire items (see Table 7.17). In total, these factors accounted for around 50% of the variance in the questionnaire data.

Table 7.16

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.77
Bartlett's test of sphericity	.00

Table 7.17

Confidence Exploratory Factor Analysis and Cronbach Alpha

Scale items	Low confidence	High confidence	Item total	Mean	*SD*
When we drink we don't make a very favourable first impression on people	1.03		0.37	2.94	1.66
When we drink we usually feel our opinions are inferior	.52		0.35	2.51	1.33
When we drink it doesn't bother us to have to enter a room where other people have already gathered and are talking		.81	0.61	4.91	1.55
When we drink we feel capable of handling ourselves in most social situations		.72	0.56	4.86	1.52
When we drink we seldom fear our actions will cause others to have a low opinion of us		.68	0.55	4.19	1.65
When drinking as a group we are never at a loss for words when we're introduced to someone we don't know		.56	0.46	4.83	1.59
When we drink we don't spend much time worrying about what people think of us		.53	0.57	4.71	1.56
Eigenvalue	1.52	2.05			
% of variance explained	21.7	29.21			
Cronbach alpha	.77				
Guttman split-half coefficient	.71				

7.4.8 Social Connectedness

To investigate the underlying structure of an eight-item questionnaire assessing competitive motives for alcohol consumption, data collected from 252 participants were subjected to maximum likelihood factoring with direct oblimin rotation. Prior to running this analysis, assumption checks were completed and were found to hold, ensuring the data was ready for analysis. The KMO test result was .94, which was above the threshold of 0.50 (Williams, Brown, & Onsman, 2012). The Bartletts's test of sphericity was significant, making it suitable for factor analysis (Williams, Brown, & Onsman, 2012). The Cronbach alpha value was .97 and the Guttman split-half coefficient was .94; these values exceeded the accepted standard (Nunnally & Bernstein, 1994). One factor (with eigenvalues exceeding 1) was identified as underlying the questionnaire items (see Table 7.19). In total, these factors accounted for around 82% of the variance in the questionnaire data.

Table 7.18

KMO and Bartlett's Test

Tests	Results
Kaiser-Meyer-Olkin	.94
Bartlett's test of sphericity	.00

Table 7.19

Social Connectedness Exploratory Factor Analysis and Cronbach Alpha

Scale items	Factor loading	Item total	Mean	*SD*
I don't feel related to anyone	.95	0.94	4.84	2.07
I have no sense of togetherness with my peers	.94	0.93	4.80	2.00
I catch myself losing all sense of connectedness with society	.93	0.92	4.85	2.15
I feel so distant from people	.93	0.92	4.74	2.09
Even among my friends, there is no sense of bother/sisterhood	.89	0.87	4.95	2.17
I don't feel I participate with anyone or any group	.89	0.87	4.94	2.20
I feel disconnected from the world around me	.88	0.86	4.77	2.09
Even around people I know, I don't feel that I really belong	.86	0.84	4.71	2.03
Eigenvalue	6.6			
% of variance explained	82.51			
Cronbach alpha	.97			
Guttman split-half coefficient	.94			

7.5 Multicollinearity

Each of the scale items was then composited to its respective constructs. This required summating the items and averaging them to form the construct; this was undertaken in SPSS using the Mean function. Correlations among constructs are shown in Table 7.20. According to Hair et al., (2006), correlations .90 and above are the first indication of substantial multicollinearity; the results here, however, show that all the correlations are below .90 suggesting multicollinearity has not occurred. The means and standard deviations of each construct are shown in the bottom rows of Table 7.20. Note that variance inflation factor (VIF) analysis was also conducted, as shown in Table 7.21, to assess any issues of multicollinearity. No results were above the 5.0 cut-off value (Stine, 1995).

Table 7.20

Correlations between Variables

Variables	1	2	3	4	5	6	7	8	9
1 Competition									
2 Copying	.088								
3 Commitments	.056	-.026							
4 Conformity	.239**	.032	.109						
5 Winding down	.234**	.112	.064	.526**					
6 Hedonism	.120	.295**	-.126*	.016	.241**				
7 Confidence	.173**	.182**	.053	.293**	.385**	.358**			
8 Social connectedness	-.016	-.052	-.060	-.104	-.143*	.178**	.014		
9 Alcohol consumption	.087	.355**	-.065	-.089	.242**	.363**	.209**	-.036	
Mean	3.62	2.38	2.01	2.23	3.54	5.1	4.14	4.83	1.37
Standard deviation	1.54	1.13	.95	1.47	1.12	1.23	1.01	1.93	.62

Note: * = .05. ** =.01.

Table 7.21

VIF Results for All Constructs

	Item used as a DV for VIF statistics								
Predictors	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1 Competition		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
2 Copying	1.2		1.2	1.2	1.2	1.2	1.2	1.2	1.1
3 Commitments	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0
4 Conformity	1.5	1.6	1.6		1.2	1.6	1.5	1.6	1.5
5 Winding down	1.7	1.7	1.7	1.3		1.7	1.6	1.7	1.6
6 Hedonism	1.4	1.4	1.4	1.4	1.4		1.3	1.4	1.4
7 Confidence	1.3	1.3	1.3	1.3	1.3	1.3		1.3	1.3
8 Social connectedness	1.1	1.1	1.1	1.1	1.1	1.0	1.1		1.1
9 Alcohol consumption	1.4	1.3	1.4	1.3	1.3	1.3	1.4	1.4	

7.6 Multiple Hierarchical Regression

Multiple hierarchical regression analysis is a statistical technique that can be used to analyse the relationship between a single dependent (criterion) variable and several independent (predictor) variables (Hair et al., 2010). The objective of multiple hierarchical regression is to use the independent variables, whose values are known, to predict the single dependent value selected by the researcher. Multiple hierarchical regression is based on correlation, but allows a more sophisticated exploration of the interrelationships among a set of variables (Pallant, 2009). Here, the outcome variable was alcohol consumption and the predictor variables were the seven motivations for drinking. The research question and hypotheses are shown in Table 7.22. Since age is likely to affect the degree and amount to which a person drinks, this was included as a control variable. Additionally, since gender affects alcohol consumption, it will be included as a control variable. Gender of subjects was dummy-coded, using zeroes and ones to convey all the necessary information on group membership, to allow this categorical predictor to be used in the model.

Table 7.22

Research Question and Hypotheses

Research question	What is the relationship between friendship alcohol motives and alcohol consumption?
Hypotheses	**H1**: Competition among group members is positively associated with alcohol consumption. **H2**: Copying drinking behaviour is positively associated with alcohol consumption. **H3**: Commitments are negatively associated with alcohol consumption. **H4**: Conformity is positively associated with alcohol consumption. **H5**: Winding down is positively associated with alcohol consumption. **H6**: Hedonism is positively associated with alcohol consumption. **H7**: Confidence is positively associated with alcohol consumption.

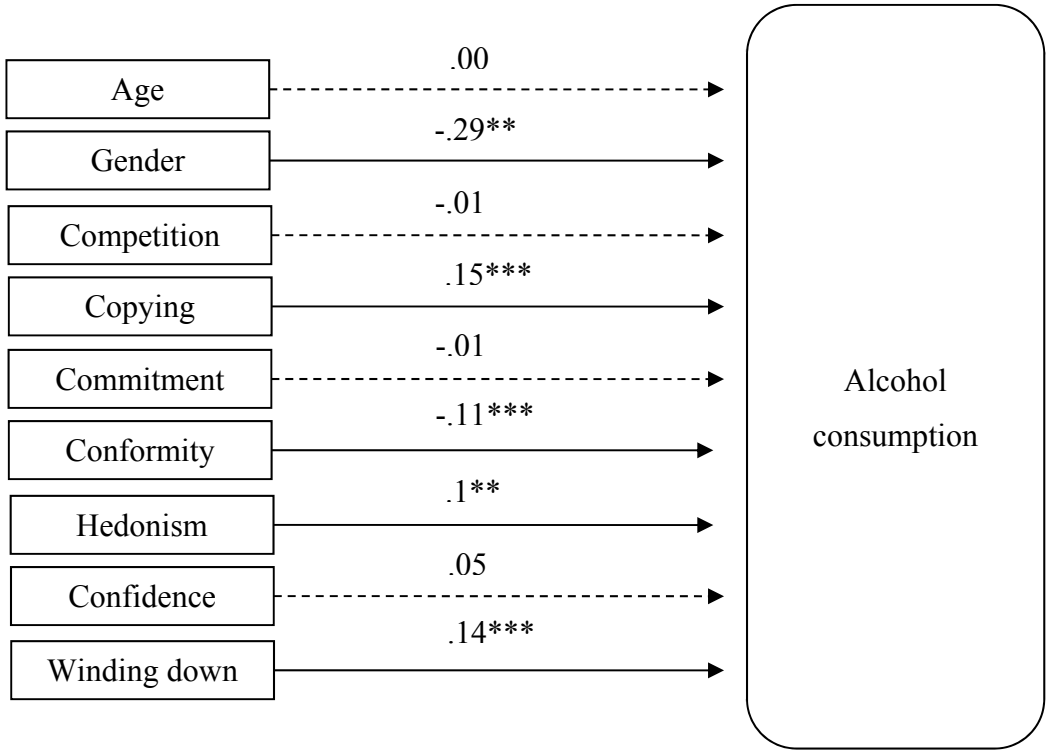
Table 7.23

Model Summary

Variable	R^2	R^2 Δ	B [95% CI]	β	sr^2
Model 1	.045				
Age in years			-.03 [-.05, -.00]*	-.127	.016
Dummy gender			-.27 [-.45, -.09]**	-.179	.032
Model 2	.277	.25			
Age in years			0.00 [-0.02, 0.02]	-0.01	.000
Dummy gender			-.29 [-0.46, -0.12]**	-0.19	.032
Competition			-.01 [-0.06, 0.04]	-0.03	.001
Copying			.15 [0.09, 0.22]***	0.28	.067
Commitment			-.01 [-0.08, 0.06]	-0.02	.000
Conformity			-.11 [-0.16, -0.05]***	-0.25	.042
Winding down			.14 [0.07, 0.22]***	0.25	.040
Hedonism			.10 [0.04, 0.16]**	0.19	.028
Confidence booster			.04 [-0.03, 0.12]	0.07	.004

Note: CI = confidence interval. *p <.05. **p <.01. ***p <.001.

Hierarchical multiple regression was used to assess the ability of seven motivational measures (competition, copying, commitments, conformity, hedonism, confidence, and winding down) to predict levels of alcohol consumption, after controlling for age and gender. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Age and gender were entered at Step 1, explaining 4.5% of the variance in alcohol consumption. After entry of the seven motivational scales at Step 2 the total variance explained by the model as a whole was 27.7%, F (9, 241) = 11.66, p < .000. The seven measures explained an additional 25% of the variance in alcohol consumption, after controlling for age and gender; R square change = .25, F change (7, 241) = 12.38, p < .000. In the final model, six measures were statistically significant, gender (beta = -.19, p < .01), copying (beta = .28, p < .000), conformity (beta = -.25, p < .000), hedonism (beta = .19, p < .01), and winding down (beta = .25, p < .000). Of these measures, five were the group-level motives. Unstandardised (B) and standardised (β) regression coefficients, and squared semi-partial (or "part") correlations (sr^2) for each predictor on each step of the multiple hierarchical regression are reported in Table 7.23.



Note: $p < .05$ = *. $p < .01$**. $p < .001$***.

Figure 7.1. Beta Weights for each Variable

Table 7.24

Summary of Hypotheses

Hypotheses	Outcome
H1: Competition among group members is positively associated with alcohol consumption.	Not Supported
H2: Copying drinking behaviour is positively associated with alcohol consumption.	**Supported**
H3: Commitments are negatively associated with alcohol consumption.	Not Supported
H4: Conformity is positively associated with alcohol consumption.	**Partially Supported**
H5: Winding down is positively associated with alcohol consumption.	**Supported**
H6: Hedonism is positively associated with alcohol consumption.	**Supported**
H7: Confidence is positively associated with alcohol consumption.	Not Supported

All of the statistically significant motives had positive beta weights except for conformity which was negative as shown in *Figure 7.1*.

7.7 Moderated Regression

The procedure for moderated regression requires a hierarchical regression, comprising three steps. These are explained as follows. Control variables were entered in Step 1: age and gender, which were dummy-coded. In Step 2, the main effects were entered: the moderator and the independent variable being tested. In Step 3 the interaction effect was added, being the moderator multiplied by the independent variable. All independent variables and moderator variables were mean centred, as recommended by Aiken and West (1988). In *Figure 7.2* the conceptual and statistical diagrams are shown.

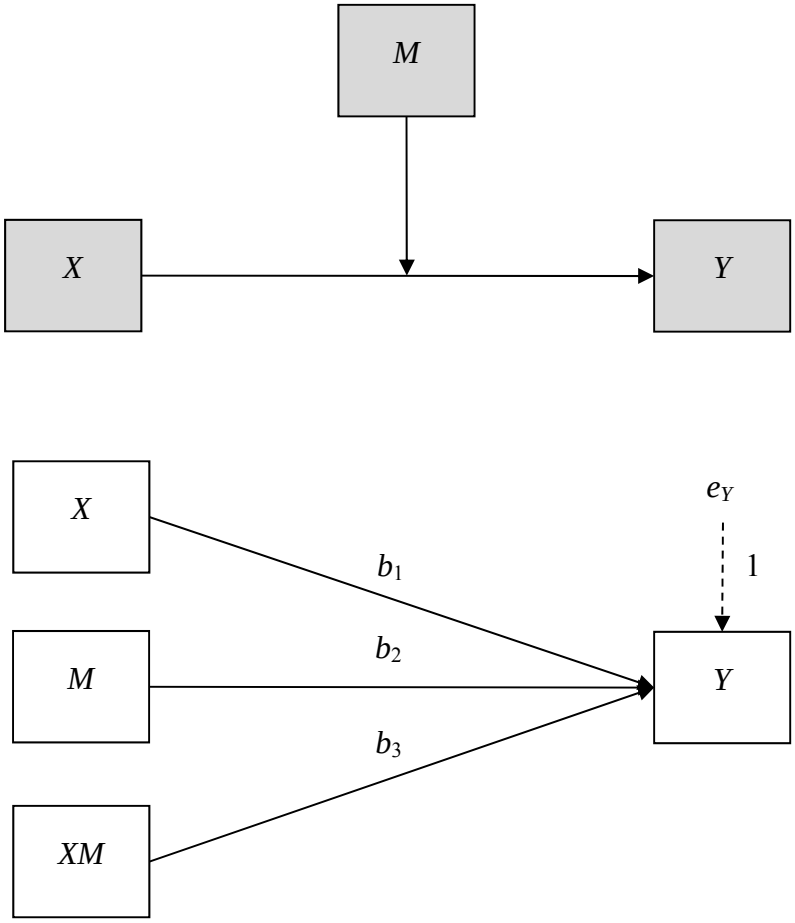


Figure 7.2. Conceptual and Statistical Diagram

7.8 Gender and Alcohol Consumption

The gender of participants and the dominant gender in their groups were tested to determine if there were significant differences between genders and their alcohol consumption. The hypotheses are as follows:

H_{8A}: Male participants will consume more than female participants.

H_{8B}: Groups consisting mostly of males will consume more alcohol than groups consisting of mostly females.

H_{8C}: Gender group composition will moderate the relationship between competition and alcohol consumption.

H_{8D}: Gender group composition will moderate the relationship between copying and alcohol consumption.

H_{8E}: Gender group composition will moderate the relationship between commitment and alcohol consumption.

H_{8F}: Gender group composition will moderate the relationship between conformity and alcohol consumption.

H_{8G}: Gender group composition will moderate the relationship between winding down and alcohol consumption.

H_{8H}: Gender group composition will moderate the relationship between hedonism and alcohol consumption.

H_{8I}: Gender group composition will moderate the relationship between confidence and alcohol consumption.

A *t*-test, one-way ANOVA and moderated hierarchical regression, was conducted to test these hypotheses. A significant difference existed between males (M = 1.5989, SD = .70) and females (M = 1.3083, SD = .58); t (249) = 3.099, p = .002 (two-tailed). This supported the hypothesis that males consume more than female participants. Since the values were logged, they had to be converted to standard drinks. This was undertaken by raising log values to their power of base 10. Thus, males drank approximately 40 standard drinks for the month of December ($10^{1.5989}$ = 39.71) and females drank approximately 20 standard drinks ($10^{1.3083}$ = 20.33).

A one-way, between-groups analysis of variance was conducted to explore the impact of gender-grouping on levels of alcohol consumption. Subjects were divided into three groups, according to the genders of the group they drank with (Group 1: mostly males; Group 2: mixture of males and females; Group 3: mostly females). There was a statistically significant difference at the $p < .05$ level in alcohol consumption scores for the three groups: F (2, 248) = 4.125, p = .017. Post-hoc comparisons using the Tukey HSD test indicated that the mean score for Group 1 (M = 1.5937, SD = .61) was statistically different from Group 2 (M = 1.3162, SD =.62). Group 3 (M = 1.3108, SD = .61) did not differ significantly from either Group 1 or 2. Again, since the values were logged, they could be transformed to their standard drinks value, which is shown in Table 7.25.

Table 7.25

Values of Alcohol Consumption for each Group

Group	Logged value	Standard drinks value
1) Mostly males	1.5937	39.23
2) Mixture of males and females	1.3162	20.71
3) Mostly females	1.3108	20.45

The relationship between each group-level motive and alcohol consumption was then tested with group gender composition as a moderator. The PROCESS plugin (Hayes, 2013) in SPSS was used to run these analyses, with Model Number 1 selected (this corresponds to the conceptual and statistical diagram shown in *Figure 7.2*), and the options 'Mean centering' and 'generate data points for plotting' checked.

Competition was assessed and a non-significant moderator relationship was found. Copying was then assessed; this relationship was not significant. Commitment was assessed; this relationship was not significant. Conformity was assessed, and a significant relationship was found. Table 7.26 and *Figure 7.3* detail the moderation effect of group gender combination on the relationship between conformity and alcohol consumption. The interaction term of Conformity and Gender Composition accounted for an additional 2.7% of the variance in alcohol consumption, $\Delta R^2 = .027$, ΔF (1, 247) = 6.99, $p < .01$. By Cohen's (1988) conventions, a combined effect of this magnitude can be considered "small" ($f^2 = .33$).

Table 7.26

Moderated Regression for Conformity

Variable	R^2	R^2 Δ	B [95% CI]
Model 1	.057	.027	
Group gender			-.166 [-.299, -.033]*
Conformity			-.04 [-.09, .013]
Interaction term			.11 [.028, .19]*

Note: CI = confidence interval. *p <.05. **p <.01. ***p <.001.

Using the "generate for plotting" calculated by PROCESS, a graph was plotted.

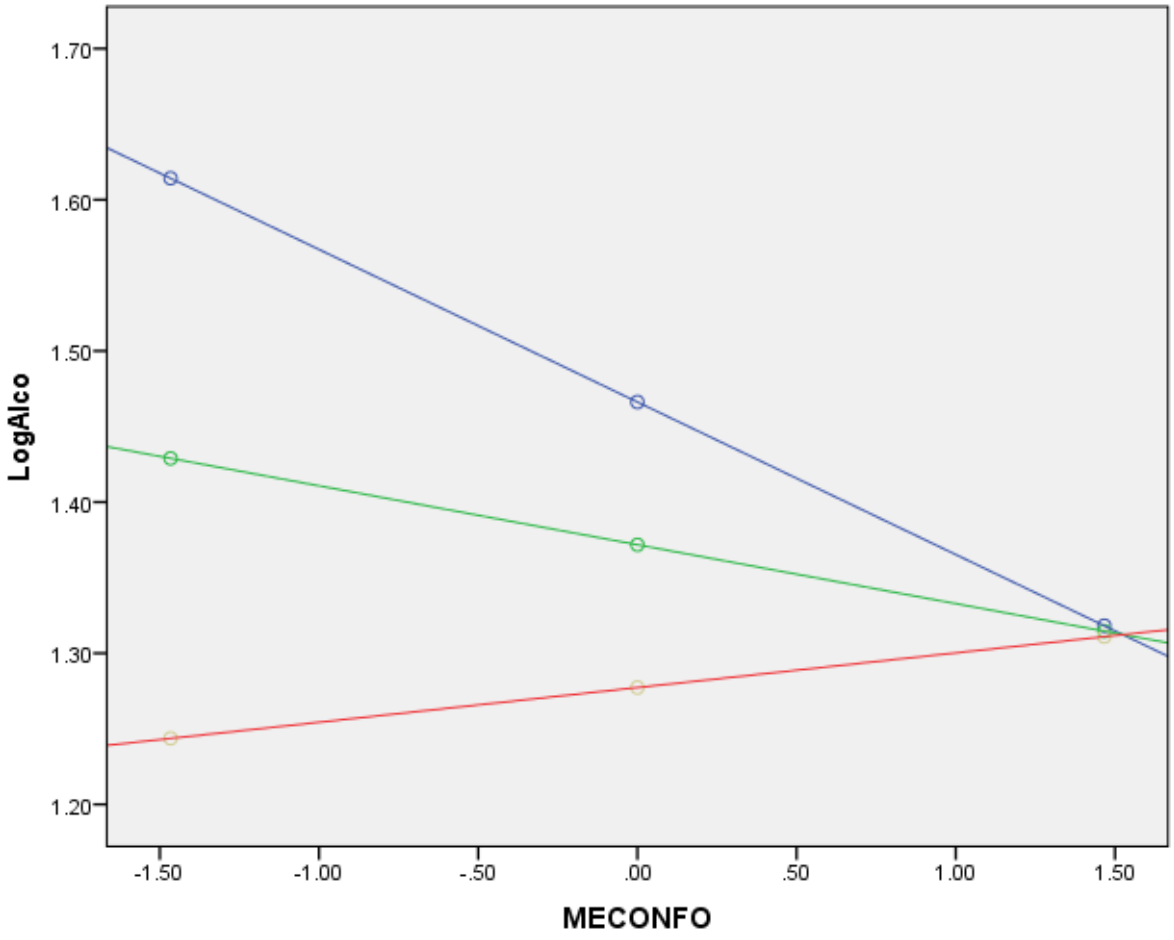


Figure 7.3. Graph of Conformity with Group Gender Moderator

Each line represents a different group gender variable. The top line which is blue represents groups mostly males, the green line in the middle represents mixed-gendered groups, and the red line at the bottom represents the mostly female group. As group conformity increases, alcohol consumption changes.

The group-level motive of winding down was assessed and found to be non-significant. Hedonism was assessed and found to be non-significant. Confidence was assessed and found to be non-significant.

The hypotheses, and whether they were supported or not, are shown in Table 7.27.

Table 7.27

Supported Hypotheses for Group Gender

Hypotheses	Supported
H_{8A}: Male participants will consume more than female participants	**Supported**
H_{8B}: Groups consisting mostly of males will consume more alcohol than other groups	**Supported**
H_{8C}: Gender group composition will moderate the relationship between competition and alcohol consumption	Not supported
H_{8D}: Gender group composition will moderate the relationship between copying and alcohol consumption	Not supported
H_{8E}: Gender group composition will moderate the relationship between commitment and alcohol consumption	Not supported
H_{8F}: Gender group composition will moderate the relationship between conformity and alcohol consumption	**Supported**
H_{8G}: Gender group composition will moderate the relationship between winding down and alcohol consumption	Not supported
H_{8H}: Gender group composition will moderate the relationship between hedonism and alcohol consumption	Not supported
H_{8I}: Gender group composition will moderate the relationship between confidence and alcohol consumption	Not supported

7.9 Drinking Style and Alcohol Consumption

Drinking style was found, within the qualitative data, to be either drinking to celebrate or just drinking habitually. This section of the thesis will test whether there is a statistically significant difference between these two styles of drinking and their relationship to alcohol consumption. It is expected that those who consume to celebrate will consume more than those who consume habitually, defined here on a weekly basis. The hypotheses are as follows:

H_{9A}: There will be a significant difference between those who drink on a weekly basis and those who drink for celebratory reasons.

H_{9B}: Drinking style will moderate the relationship between competition and alcohol consumption.

H_{9C}: Drinking style will moderate the relationship between copying and alcohol consumption.

H_{9D}: Drinking style will moderate the relationship between commitment and alcohol consumption.

H_{9E}: Drinking style will moderate the relationship between conformity and alcohol consumption.

H_{9F}: Drinking style will moderate the relationship between winding down and alcohol consumption.

H_{9G}: Drinking style will moderate the relationship between hedonism and alcohol consumption.

H_{9H}: Drinking style will moderate the relationship between confidence and alcohol consumption.

An independent-samples *t*-test was conducted to compare the alcohol consumption scores for people who consume to celebrate with those who consume weekly. There was a significant difference in scores for those who consume to celebrate ($M = 1.122$, $SD = .56$) and those who consume on a weekly basis ($M = 1.7592$, $SD = .50$) ($t\ (249) = 9.15$, $p = .000$ (two-tailed)). Logged values were transformed to their standard drinks values: those drinking to celebrate drank 13 standard drinks in December and those drinking on a weekly basis drank 57 standard drinks over the same period.

Each group-level moderator was then run in the moderation analysis with alcohol consumption as the outcome variable and drinking style as the moderator. All the interactions between the predictor variables and moderator were not significant; therefore, none of the hypotheses for the moderation analysis were supported. The results of this hypothesis testing are shown in Table 7.28.

Table 7.28

Supported Hypotheses for Drinking Style

Hypotheses	Supported
H_{9A}: There will be a significant difference between those who drink on a weekly basis and those who drink for celebratory reasons	**Supported**
H_{9B}: Drinking style will moderate the relationship between competition and alcohol consumption	Not supported
H_{9C}: Drinking style will moderate the relationship between copying and alcohol consumption	Not supported
H_{9D}: Drinking style will moderate the relationship between commitment and alcohol consumption	Not supported
H_{9E}: Drinking style will moderate the relationship between conformity and alcohol consumption	Not supported
H_{9F}: Drinking style will moderate the relationship between winding down and alcohol consumption	Not supported
H_{9G}: Drinking style will moderate the relationship between hedonism and alcohol consumption	Not supported
H_{9H}: Drinking style will moderate the relationship between confidence and alcohol consumption	Not supported

7.10 Moderated Regression for Social Connectedness and Alcohol Motives

This measurement scales uses all negatively worded scale items; therefore, the higher the score the lower the level of social connectedness in the subject, and conversely, the lower the score the higher the level of social connectedness. The seven moderation hypotheses are as follows:

H_{10A}: Social connectedness will moderate the relationship between competition and alcohol consumption.

H_{10B}: Social connectedness will moderate the relationship between copying and alcohol consumption.

H_{10C}: Social connectedness will moderate the relationship between commitment and alcohol consumption.

H_{10D}: Social connectedness will moderate the relationship between conformity and alcohol consumption.

H_{10E}: Social connectedness will moderate the relationship between winding down and alcohol consumption.

H_{10F}: Social connectedness will moderate the relationship between hedonism and alcohol consumption.

H_{10G}: Social connectedness will moderate the relationship between confidence and alcohol consumption.

The relationship between competition and alcohol consumption with social connectedness as the moderator was found to be non-significant. Copying was found to be non-significant. Commitments were found to be non-significant. Conformity was found to be non-significant. Winding down was not significant. Hedonism was not significant. Lastly, the moderating effect of social connectedness on the relationship between confidence and alcohol consumption was not significant. The results of this hypothesis testing are shown in Table 7.29.

Table 7.29

Summary of Social Connectedness Hypotheses

Hypotheses	Supported
H_{10A}: Social connectedness will moderate the relationship between competition and alcohol consumption.	Not supported
H_{10B}: Social connectedness will moderate the relationship between copying and alcohol consumption.	Not supported
H_{10C}: Social connectedness will moderate the relationship between commitment and alcohol consumption.	Not supported
H_{10D}: Social connectedness will moderate the relationship between conformity and alcohol consumption.	Not supported
H_{10E}: Social connectedness will moderate the relationship between winding down and alcohol consumption.	Not supported
H_{10F}: Social connectedness will moderate the relationship between hedonism and alcohol consumption.	Not supported
H_{10G}: Social connectedness will moderate the relationship between confidence and alcohol consumption.	Not supported

7.11 Conclusion

This chapter presented the results for Study 2. The chapter first reported the results of the preliminary analysis showing the assumptions and data cleaning needed for analysis. Secondly, the constructs were tested for reliability and validity through exploratory factor analysis and Cronbach alpha. Thirdly, differences between groups on alcohol consumption were examined. Fourthly, hierarchical multiple regression was conducted with gender and age as control variables. Fifthly, the results of the moderated regression were shown. The results of the hypotheses were presented. The next chapter reviews the key findings of this chapter.

Chapter 8 Discussion

8.0 Introduction

The purpose of this research was to investigate motives or reasons for drinking in a group. Friendship groups have an important peer influence on drinking behaviours and this thesis is the first to examine empirically how these groups influence drinking levels. To this end, the following research question was developed: What are the friendship group–level motives for alcohol consumption? The previous seven chapters have introduced the topic of research (Chapter 1), given a review of the literature (Chapter 2), detailed the methodology for Study 1 (Chapter 3), discussed the results and analysis of Study 1 (Chapter 4), stated the model development and hypotheses (Chapter 5), reported the methodology for Study 2 (Chapter 6) and finally, presented the results and analysis for Study 2 (Chapter 7). This chapter concludes the thesis by discussing the overall research purpose, the overall findings, the contributions to both theory and practice, the limitations of the research and directions for future research, and finally, the conclusion.

8.1 Overall Research Purpose

Alcohol consumption motives have been well established at an individual level of analysis, with Kuntsche et al., (2005) identifying four motives. However, group-level motives have not been examined. Consequently this research sought to locate theory which delves deeper into explaining alcohol consumption in groups; thus, Köhler's motivational gains and collective intentions was selected as the guiding theories. After a review of the relevant literature, three research questions were developed:

RQ1 What are the friendship group-level motives for alcohol consumption?

RQ2a What is the relationship between friendship alcohol motives and alcohol consumption?

RQ2b Do friendship group features moderate the relationship between motives and alcohol consumption?

8.2 Group Level Motives for Alcohol Consumption

Study one's corresponding research question was RQ1: What are the friendship group-level motives for alcohol consumption? Overall, seven group-level motives were found for consuming alcohol in the friendship group. The first motive identified was competition which is "the desire to win in interpersonal situations" (Helmreich & Spence, 1978, p. 4). This motive was found to increase alcohol consumption as members tried to win. However, some interview participants were very adamant that they did not drink for this reason, which could suggest either social desirability bias, or that they do not want be associated with the kinds of people who drink for this reason.

The second motive was copying, whereby people within the group copy each other's drinking patterns. Past literature has shown that people automatically mimic numerous aspects of their interaction partners, including their postures, gestures, mannerisms, speech patterns, syntax, accents, facial expressions, and even moods and emotions (Chartrand & Bargh 1999; Chartrand et al., 2005; Dijksterhuis et al., 2006). Copying is interesting because this type of behaviour can happen automatically, with participants not knowing they are doing it. Therefore, it is likely that those who did notice it and were able to discuss it, also had not noticed it many more times.

The third motive was commitments and included personal obligations and responsibilities, which could be school- or work-related. These were things that "got in the way" of drinking, such as exams, driving, or work. Individual commitments and group commitments can overlap so that a single person might have some commitment, be it work or study related, and their group might influence that person to either be responsible and stop their drinking or pressure them to keep drinking. Group commitments can overpower individual commitments; for instance, a group of friends who study at university might be drinking at the university bar during exam week and will limit each other's intake and decide that everyone should go home early.

The fourth motive was conformity. Conformity was defined as trying to fit with an admired group or to avoid peer rejection (Grant et al., 2007). This motive is interesting because it can cut both ways: the group can conform to moderate alcohol consumption, or it can conform to excessive alcohol consumption. Conformity binds the group to certain behavioural drinking styles, with some participants having to physically leave or pretend to spill drinks in order remove themselves from the group conformity dynamic.

The fifth motive was winding down, which was where the person relaxed by drinking. Most of the participants said that this was one of the main reasons they consumed alcohol. Usually this motive was present in university students who had had a hard day of lectures or exams and would result them going to have a few drinks at the university bar. This winding down was a kind of recovery process that was used as a restorative procedure after stressful events. It is likely that after feeling stressed, then consuming alcohol to reduce that stress, the person would become socialised into using alcohol as a stress reducing agent and this would become habit-forming.

The sixth motive was hedonism: a hedonic motive where fantasy fulfilment and other aspects of pleasure were emphasised. Hedonic value is subjective and personal, and results from fun and playfulness (Holbrook & Hirschman, 1982). Increased arousal, heightened involvement, perceived freedom, fantasy fulfilment and escapism may all indicate a hedonic experience (Bloch & Richins, 1983). Hedonic motives were usually associated with heavy alcohol consumption. Indeed, some authors have adopted the term “calculated hedonism” when refering to binge drinking (Szmigin et al., 2008). Calculated hedonism is a term that has been adopted to make up for the shortcomings of the sometimes confusing, poorly defined, emotive, and polically charged usage of the term binge drinking. Such drinking behaviour is a form of planned letting go which balances out the constrained behaviour young adults are subject to in the formal structures of everyday life in school, work, and family (Szmigin et al., 2008).

The seventh and final motive identified was confidence, where the group drank to feel more confident. Alcohol was used as a form of bravery enhancer to allow some men to talk to women by reducing their nervousness and shyness. While not uncovered by this research, it has been found in past research that alcohol consumption holds the promise of sexual and social fulfilment (Szmigin et al., 2008). Helping self-confidence in a social situation was also a key motive of alcohol consumption found in past literature (Institute of Alcohol Studies, 2006).

8.3 Relationship Between Friendship Group Motives and Alcohol Consumption

The overall results for RQ2a What is the relationship between friendship alcohol motives and alcohol consumption? show that although copying, conformity, hedonism, and winding down were significant predictors for alcohol consumption, competition, commitments, and confidence were not significant.

Copying behaviour was measured using the differential association measure developed by Higgins, Fell, & Wilson (2006). Differential association involves the direct association with individuals who may engage in certain forms of conduct that will result in exposure to specific sets of values and norms (Durkin, Wolfe, & Clark, 2005). This significant relationship was expected, as people within groups usually conform to the desired standards of the group. Peer groups provide an individual with definitions, models for imitation and differential reinforcement for criminal and conforming behaviour (Akers, 1998).

The results showed that conformity motives were negatively associated with the quantity and frequency of alcohol use and heavy drinking; this is not consistent with past research showing conformity is positively related to drinking problems (Grant et al., 2007). This unusual result may be explained by participants drinking just enough to fit in with the group's pro-consumption norms but not overdoing the alcohol. This finding points to both the positive and negative influences of friendship groups for drinking: where the group norms are moderate or low levels of drinking, the motives of the groups would be moderated while the opposite would be true of groups with heavy drinking motives.

Hedonism was defined as increased arousal, heightened involvement, perceived freedom, fantasy fulfilment and escapism (Bloch & Richins, 1983). The measurement scale items used words such as adventure, joy, enjoyment, escape and spur-of-the-moment. Drinking to escape has been well documented as a coping mechanism in regards to alcohol consumption (Kuntsche et al., 2005). The hedonic group-level motive was significantly and positively related to alcohol consumption

Winding down was characterised by relaxing mentally and physically and is a typical reason why people consume alcohol. The winding down group-level motive was significantly and positively related to alcohol consumption. As the group-level motive of winding down increased so did alcohol consumption. This alcohol consumption behaviour is associated with stress reduction after work or study.

One explanation for the lack of significance for competition may be the measurement which used a work-context scale reflecting interpersonal competiton. This interpersonal competition may only be activated in a work context rather than in the context of drinking in a friendship group. Friends are less likely to feel threatened by each other compared to a work group whose members are likely to have certain established statuses and leadership roles. Indeed, intense competiton at the workplace is associated with greater alcohol consumption (Parker & Hardford, 1992).

Commitments was also non-significant. Despite previous research at the individual level that showed the influence of commitments such as sport, work or study on reducing alcohol use, there was no effect (either increasing or decreasing) on alcohol. An explanation for this might be the individual nature of commitments rather than the group nature of a commitment. Commitments that this particular scale measures are very individually focused; indeed some of the items consist of behaviours that cannot be completed in a group. For instance, only one person can drive at a time. Therefore, adapting a scale that uses indivdually focused behaviours may not be enough, and a new scale with items generated from focus groups with the friendship group as the level of anaylsis should be constructed.

Confidence has been found to influence alcohol use in previous research dealing with early adolescents who are developing their friendships, with highest levels of drinking found in adolescents who score high self-confidence (Engels, Scholte, van Lieshout, de Kemp, & Overbeek, 2006). This research looked at the group's level of confidence when they drink as opposed to examining whether the group in general has high self-confidence as a group-level characteristic. This may explain why, at an individual level, high self-confidence is significantly related to alcohol consumption, whereas group-level confidence is not. Essentially, the direction of the relationship between the attitude and the behaviour may be different depending on how it is measured. Does high group confidence lead to high group alcohol consumption or does high alcohol consumption give our group higher levels of confidence? Further more, does this relationship spiral upwards, with drinking giving the group more confience, which promotes more drinking and so on?

8.4 Influence of Group Gender Composition, Occasion and Social Connectedness

Friendship group factors which influenced the relationship between alcohol motives and alcohol consumption were identified as gender composition, occasion and social connectedness. This addressed RQ2b: Do friendship group features moderate the relationship between motives and alcohol consumption? Study 2 hypothesised that males would consume more than females and this hypothesis was supported. Males have been found, in previous studies (Wilsnack, Wilsnack, Kristjanson, Vogeltanz-Holm, & Gmel, 2009), to consume significantly more than female participants. Study 2 also hypothesised that groups consisting predominantly of males would consume more than groups consisting mainly of females. This hypothesis was also supported. Both hypotheses support the notion that men consume more than women. Explanations for this phenomenon are varied but are supported by gender-role theory (Connell, 1987), which posits that traditional gender roles – such as males being masculine and competitive and women being passive and caring (Huselid & Cooper, 1992) – influence alcohol consumption (Wilsnack, Vogenltanz, Wilsnack, & Harris, 2000).

Furthermore, it is postulated that gender roles may amplify biological differences in reactions to alcohol and that gender differences in drinking behaviour may be modified by macro-social factors that modify gender-role contrasts (Wilsnack et al., 2000). For example, giving men, but not women, the licence and tolerance to get drunk in public, may be important to men in some cultural settings to symbolise men's superiority to women in status and authority (Wilsnack et al., 2009). Self-restraint of drinking by women in some cultural settings may demonstrate their roles as social guardians and restraining influences on male recklessness (Holmila & Raitasalo, 2005).

Drinking in groups is another important issue concerning gender issues in alcohol consumption. Drinking has been found to be less important to women's social roles, than it is to men's (Wilsnack et al., 2009). Previous research has found membership in male-dominated entities, such as fraternities (Capone et al., 2007), athletic teams (Tewksbury, Higgins, & Mustaine, 2008), law enforcement (Obst, Davey, & Sheehan, 2001) and the military (Gutierrez, Blume, Schmaling, Stoever, Fonseca, & Russell, 2006), is associated with increased alcohol use and drinking-related problems. Male drinking practices in rural pubs persist because they are a site of male power and legitimacy in rural community life (Campbell, 2000). Drinking and heavy drinking is understood to be a form of "macho" or masculine behaviour. In that context, drinking stories for men are considered important because they are expressions of a specific type of masculine identity – one that is wild, tough, popular, youthful, aggressive, competitive, confident, and anti-feminine (Schacht, 1996).

Study 2 hypothesised that those who consume to celebrate will consume more than those who just consume habitually. The results revealed a significant difference between the two occasions; however, it was those who drank habitually that consumed more than those who drank just to celebrate. Those drinking to celebrate drank, on average, 13 standard drinks in December and those drinking on a weekly basis drank 57 standard drinks over the same period. The results are unexpected, as those drinking to celebrate – especially in the month of December – would usually consumer more than those who consume habitually. It could be that those who consume to celebrate have fewer drinking occasions than those who consume on a weekly basis. In terms of drinking to celebrate, birthdays (especially twenty-firsts

within the American context) have been found to be associated with high levels of alcohol consumption. The "21 for 21" phenomenon, whereby those turning 21 consume 21 drinks, has also been identified as a significant factor in heavy drinking (Rutledge,
2008).

Study 2 examined the effect of social connectedness on the relationship between alcohol motives and alcohol consumption. Social connectedness was found to have no effect on moderating the relationship of all the motives, with none of the hypotheses supported. Social connectedness is the degree to which a person perceives close relationships with the social world. A group with a high sense of connectedness has members who can easily form relationships with others and participate in social groups and activities, whereas groups who lack connectedness are inclined to have members who experience low self-esteem, anxiety, and depression (Lee & Robbins, 1998). One explanation as to why social connectedness did not moderate any of the relationships between group-level motives and alcohol consumption is that the social connectedness items measured individual levels of social connectedness and not the group's level. This could suggest that the individual-level psychological trait of social connectedness does not have a big enough influence on the relationship between group-level motives and alcohol consumption to produce a significant impact. Perhaps a different measure of belongingness could be used since social connectedness may not be sensitive enough to capture subtle manifestations of being part of a group. Social assurance could be used instead as it taps into aspects of companionship, rather than the intense and pervasive sense of security that social connectedness taps into (Kohut, 1984). That being said, measures of group connectedness or belonging have been criticised for only reflecting aspects and not the whole construct, with Lee and Robbin (1995) asserting that the belongingness construct remains an elusive, complex, and multifaceted psychological construct. Other measures could also include: the Need to Belong Scale (NTBS) (Leary, Kelly, Cottrell, & Schreindorfer, 2013), or the Organisational Cohesion Scale (OCS) (Ruga, 2014).

8.5 Contributions to Theory, Practice, and Methods

The main objective of this research was to determine whether a midstream level of friendship groups influences alcohol consumption; specifically, group-level alcohol motives were identified and empirically examined. This research advances theory and methods as well as offering practical implications for social marketers.

8.5.1 Contributions to Theory

The first contribution this research makes to theory is the external validation of Köhler's motivational gains theory (Kerr, Forlenza, Irwin, & Feltz, 2013). Previous research of this theory has relied heavily on experimental designs (Hertel et al., 2008), which were excellent for testing internal validity, but lacked the external validity needed for generalisability. This research, through interviews and survey data, found aspects of Köhler's motivational gains existed within friendship groups in the context of alcohol consumption. This also adds to theory by testing motivational gains in a friendship group context which, to date, has not been done. Evidence for collective intentions was also found within the qualitative research, in terms of participants having similar motives to the group or similar reasons for consuming alcohol at the same point in time, such as winding down after a stressful event.

This research found evidence of one aspect of Köhler's motivational gains: that verbal communication between group members pushed individuals to consume more alcohol. Prior to mid-2012 there was no evidence that verbal communication was a factor for increased motivation between groups in research of Köhler's motivational gains; it was assumed that observation by participants was the main factor for increased motivation. However, during this research analysis process, more journal articles have been written on this topic and evidence has been found that verbal communication does indeed affect this relationship (Osborn, Irwin, Skogsberg, & Feltz, 2012). Interestingly, verbal encouragement can actually reduce output effort as it can be perceived by the listener as a signal that the other person is struggling with the task and is engaging in self-encouragement (Irwin, Feltz, & Kerr, 2013), which

makes sense as the listener will push harder when they perceive their partner to be slightly stronger than themselves, not when they perceive them to be weaker.

An aspect of another of Kohler's (Kerr et al., 2008) dimensions, mimicry, conceptualised as copying, was found within the qualitative research and quantified within the survey measures. Within Köhler motivational gains research, the outcome variable is usually a strength persistence task, as opposed to something which can be done at a leisurely pace such as alcohol consumption; thus, mimicry is not something found within previous literature. Copying each other's pace on a strength persistence task is either impossible due to the way the task is designed or very unlikely to be done because the participants are actively focusing on what they are doing, and there is no time for unconscious mimicry to occur. Therefore, this research finds a new factor involved in Köhler's motivational gains which impacts on the outcome variable that is measured.

Research within the alcohol field has typically focused on the individual, with questions usually concentrating on matters such as what issues impact the individual drinker or how can an individual drinker reduce their drinking. This approach affects the way alcohol moderation campaigns are designed and the way future research is conducted. This research took a midstream focus by operationalising friendship group–level constructs and focusing on the group, not just the individual. By taking a midstream approach, this research has lifted the lens of focus up a level to examine the impact of the friendship group on alcohol consumption. Although the power of peer pressure has been well documented and studied, the collective power of friendship group–level motives is very limited. This research contributes to motives for alcohol consumption by expanding the motives to encompass the friendship group and by studying the influence and force that friends have on the target individual. One reason for the lack of research on friendship level motives is the unfamiliarity of the field to group-level research. This research finds that friendship group–level motives have a powerful effect on alcohol consumption and that future research needs to examine people from a group perspective. Furthermore, research should also go beyond the group to examine the environment and the interactive effects that the individual, group, and environment have.

8.5.2 Contributions to Method

The first methodological contribution relates to the measurement of alcohol consumption. The male dropout rate was rather high in this survey, which suggests that they may have had trouble with the alcohol consumption scale. This scale was the graduated frequency scale, which asked participants to think about their consumption within the past four weeks, and then answer six questions which asked about different levels of consumption, ranging from 21 or more standard drinking in one drinking session to one or two standard drinks in one session, by answering with different levels of frequency ranging from almost every day to never. A more accurate self-reporting measure would be the use of diaries, where the respondent records their alcohol consumption after every time they drink. Whilst this measurement technique is more accurate than the graduated frequency scale, it has obvious limitations in terms of needing a long time frame to collect the data.

In order to measure friendship group–level motives for alcohol consumption, not only was there a need for accurate measures but these had to be located and each item within each measure needed to be reworded to fit with alcohol consumption and group motives. This involved changing individual-level statements such as "I like to …" to group-level versions such as "We like to …" and included lead-in statements such as "When your friendship group goes out to drink …" This framed the questions for the respondent and allowed the latent construct to accurately measure group-level motives for alcohol consumption from a group perspective. Most of the items formed valid and reliable constructs; however, some items were removed because of low factor loadings. For instance, the hedonism scale broke down into two factors: one for enjoyment and another labelled escapism. Whilst the items for the enjoyment factor loaded correctly, the escapism items either cross-loaded or were very low. This meant that this latent construct could still be measured using the three items that were left. It has been said that when an individual identifies with a group, that ingroup becomes part of the self, acquiring social and emotional significance (Smith & Henry, 1996). Additionally, people's attitudes and behaviours generally tend to converge toward those that are prototypical of their groups when group membership is salient (Spears, Dooske, & Ellemers, 1997).

Group-level measures are distinct from individual-level measures, with Smith, Seger, and Mackie (2007) finding that "individual and group profiles do not merely differ in the overall level or intensity of emotions reported: They are qualitatively distinct" (p. 441). Furthermore, past research has found that group-level emotions regulate intergroup and intragroup attitudes and behavioural tendencies, with group-level emotions predicting group-relevant action tendencies even when individual-level emotions are statistically controlled (Smith et al., 2007). Parkinson, Fischer, and Manstead (2005) suggested that greater group cohesion increases mutual social influence, making it more likely that group members will interpret and respond to future emotional events in similar ways.

8.5.3 Contributions to Practice

Strategies could be developed to educate respondents on how to deal with direct influence and conjunctive task events; however, these techniques would only work with those people who are motivated to use them. Due to indirect influence and collective intentions, group processes are likely to override individual autonomy. As such, focus should be directed on the group as whole, not on just a few individuals in the group who are motivated to consume at moderate levels. Providing alternatives to drinking events would serve as one approach. These alternatives would need to be seen as competitively desirable – from the point of view of the consumer, they need to be either more attractive or more fun than risky drinking. Activities suggested by respondents included increasing opening hours for shopping, more sporting events to participate in and video game events with free food on university campuses. Each event would need to be tailored to specific segments of the population, as people consume for different reasons, and thus, events should serve slightly different needs.

The four significant motives could serve as potential reasons as to why people consume and a campaign focusing on each motive (or multiple motives simultaneously) could be developed. In order for the programme to be actioned properly, it must deliver similar benefits to the benefits that these motives deliver, but without alcohol. Thus, a campaign focusing on drinking games could swap alcohol for video games or sports games. A campaign focusing on winding down could teach mindfulness techniques for relaxation purposes.

The way in which alcohol policy should be positioned is one of shared responsibility, not just individual responsibility and not just government responsibility. It should involve all stakeholders which includes the users, the makers, the distributors, and the regulators. Indeed, some authors express the view that there lies a deep contradiction between young people's lived experience of alcohol and government policy discourses based on appeals to individual moral responsibility (Hackley, Bengry-Howell, Griffin, Mistral, & Szmigin, 2011). Campaigns should not focus all the attention on the individual; this myopic point of view leads to tunnel vision by avoiding the impact of the friendship and work group and the environment in which alcohol is consumed. When the target audience has the internal motivation to act and the external motivation to change coming from friends, family, and co-workers in addition to being given the opportunity to do so through changes in the environment, coupled with the ability to do so, then, and only then, will the individual will be receptive to the anti-alcohol consumption campaigns that community groups and governments fund. Until structural and community changes are made, which flow down to the individual, it will be hard for the individual to change their behaviour.

8.6 Limitations and Directions for Future Research

As with all research, there are a number of limitations within the research. This section will outline the limitations and offer directions for future research. This research focuses on the respondent's friendship group and leaves out the potential for other drinking groups, such as the workplace group or a sports team. Future research needs to take into consideration other groups when alcohol consumption occurs. One fruitful direction would be to use social network analysis, whereby all members of the group are identified through their relationships, and sociograms can be used to display their links within a social network. People were interviewed about their friendship group, as opposed to interviewing the friendship group as a whole. This limited the ability of the participant to "talk for" other group members, and left out other voices. Future research should use focus groups or at least dyad interview techniques to gather data.

This study collected data within Australia, but not other countries. It is likely that there may be cultural effects only seen within this sample. Indeed, there are noticeable difference in drinking styles between men and women in various countries (Babor et al., 2010) and, as such, future research needs to examine alcohol consumption in other countries. Both methods, interviews and online surveys, used self-reported instruments to collect data; respondents within the interviews gave their own interpretations of events and those who completed the survey did so using self-reported measures. Future research should consider the use of observational techniques and projective techniques in interviews to delve deeper and triangulate the analysis.

The survey data was collected using cross-sectional means, meaning that it is harder to prove causality, as temporal effects may influence the timing of motives and alcohol consumption. Therefore, future research should use longitudinal methods to collect data. Lastly, the survey data collected each respondent's views about their particular friendship group and not the group as a whole. In order to more accurately incorporate other friends' responses, a stratified sampling technique should be used, whereby the participant and their friends are included in the data collection process. Additionally, multilevel modelling should be used to properly analyse this hierarchical data.

The Australian context as a wet-drinking culture is a limitation of the study. Alcohol remains Australia's number one drug problem, as it is in many other developed countries (Degenhardt & Hall, 2012). The motives identified in this study reflect a culture of drinking and may not be readily transferred to countries with more moderate drinking behaviours. For instance, Australia and Germany have been identified as high binge drinking countries whereas Japan and Italy have been identified as moderate binge drinking countries (Hogan, Perks, & Russell-Bennett, 2014). Further research should examine group-level motives in countries where alcohol consumption is different, to identify the impact of motives on both high and moderate drinking behaviours.

This research did not examine a broad range of boundary conditions and moderators for the impact of group-level motives on alcohol consumption. Further research

should go beyond demographics and social connectedness to investigate the influence of other factors such as strength of friendship ties, social identity, and normative influence.

8.7 Conclusion

In summation, this research inquiry investigated the role of group-level motives in alcohol consumption, and explored the role moderators have on the motive–consumption relationship. Alcohol consumption has been linked to various problems such as cancer, accidents, violence, and other costs to society. Young adults usually consume at risky levels within the friendship group, as friends provide access to alcohol and rituals around consumption. As such, individuals are seen as being nested within these friendship groups, with friends exerting influence on the individual. This research has found seven group-level motives for drinking alcohol. Four of these motives were significantly related to alcohol consumption and accounted for 27.7% of the variance explained.

This research has addressed three main research gaps within the literature. Firstly, by moving the focus on group-level motives, as there has been a heavy focus on individual-level motives and a lack of attention on group-level motives (Wymer, 2011). Secondly, by using the friendship group as a basis for study, as there has been a lack of group motivational studies that focus on real-world activities – outside of the lab and through the use of strangers (Hertel, Kerr, & Messe, 2000; Kerr et al., 2007). And finally, by addressing the fact that no information existed, to date, on the group-level motives for drinking. This study represents an important first step in assessing group-level motives for drinking and demonstrates an area worth further academic investigation.

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Appendix A – Australian Government Initiatives

First Round funding 2008 ($3.5 million)		
Name	**Amount awarded**	**Objective**
Careworks for the Frog Crew project	$118,000	Support a crew of trained and equipped primarily volunteer youth workers to serve the needs of young people on Friday and Saturday nights in Sydney's Sutherland Shire.
Waminda	$248,775	To increase the confidence of young Aboriginal women to manage their drinking, relationships and sexual health.
Newcastle City Council for the Miromulliko project	$249,955	To manage environments in the Newcastle late night inner city in order to reduce the level of harm associated with binge drinking.
Broken Hill Community Drug Action Team for the Drink Safe Community Initiative	$236,000	To reduce risky drinking behaviours and develop an ongoing "Drink Safe Community" initiative.
Nambucca Valley Youth Services Centre for the Mid North Coast Street Team	$250,000	To engage young people in developing and implementing preventative strategies to reduce the incidence of risky alcohol use.
Assisting Drug Dependants Inc for the Party Safe Binge Drinking Project	$243,300	To minimise harm and risky behaviours associated with binge drinking through a number of initiatives aimed at young people in the Canberra region.
Sunrise Health Service Aboriginal Corporation for the Grog and You project	$149,944	to reduce the incidence of binge drinking among youth in Indigenous communities east of Katherine in the Northern Territory by providing key life skills, enhancing attitudes and positive behaviour in being responsible with alcohol, and increasing awareness of alcohols harmful effects to themselves, family and community.
King Island Council for the Youth Access Program	$60,800	To provide alcohol-free venues for youth related activities.
Lutheran Church of Australia for the On Friday Night in Kilburn project	$248,954	
Shire of Katanning for the Katanning Alcohol Prevention Project	$210,730	To provide young people with information, skills and knowledge to make appropriate decisions about consuming alcohol.
Milbi Incorporated for the Club 500 Binge Drinking Awareness	$150,000	To target Indigenous and non-Indigenous youth by conducting anti-binge drinking events such as concerts and school visits.
Australian Red Cross Society Queensland for the Binge Drinking Harm Minimisation Project	$150,000	To respond to binge drinking, specifically towards the needs of vulnerable target groups in the greater Brisbane and Toowoomba area.
Anglicare North Queensland Limited Youth Substance Misuse Service for their Binge Drinking Initiative	$150,000	To provide school leavers with awareness of laws, penalties, standard drinks, drink spiking and many similar activities.
Ipswich State High School & Bremer State High School for their Post Formal Mystery Tour	$40,000	For drug and alcohol free alternatives for students to celebrate their end of Year 12.
Sunshine Coast Youth Partnership Inc for the Drink Safe Coalition	$250,000	To promote the concept of safe drinking and provide community capacity and engagement to support and proliferate targeted programs, interventions and alternative activities.
Russian Ethnic Representative Council of Victoria for their Reducing Binge-drinking in Russian/Slavic project	$150,000	To conduct a broad community education campaign.

Victorian Arabic Social Services for their Stay Cool: Think before you drink project	$150,000	To boost resilience and protective factors as well as awareness-raising across the Arabic community.
Springvale Community Aid & Advice Bureau for their Binge Drinking Project	$229,904	To increase personal responsibility and decrease risk taking behaviour by engaging young people.
City of Greater Geelong for the Barwon Safe Parties Project	$241,030	To address issues related to young people, alcohol and parties.

Second round funding 2009 ($3.5 million)

- $150,000 to CatholicCare Canberra & Goulburn in Canberra for *GROG Watch*, which will provide support and intervention to young binge drinkers referred by ACT Policing and ACT Ambulance services.
- $250,000 to the Armadale Youth Resources in Armadale for Kickin It–Kids Choosing Kreative Interests, to tackle binge drinking in the Armadale area. The two-year project will target alcohol sales to underage youth, provide alcohol education and promote alcohol-free activities, culminating in an autumn festival. The project will include working closely with junior football clubs in Armadale.
- $217,685 to the University of Western Australia in Crawley for Tertiary Alcohol Project 3, a two-year project tackling binge drinking on college and university campuses. The harm reduction project is designed to reduce risk taking behaviour associated with excessive alcohol consumption among tertiary students.
- $147,650 to the Western Australian Network of Alcohol and other Drug Agencies in West Perth for IYAG – Indigenous Youth Against Grog, a two-year project to tackle serious alcohol issues among young people in two communities. IYAG will develop regional and age appropriate, Aboriginal culturally sensitive education and prevention workshops and materials to raise awareness and reduce risks of binge drinking.
- $148,235 to Big hART Incorporated in North West Tasmania for a one-year project, called Smashed, which is aimed at promoting responsible alcohol consumption and exposing risks associated with binge drinking. The project will assist young people in the North West to produce short films on the issue of binge drinking, culminating in a short film competition.
- $150,000 to Finding Workable Solutions Inc in Kingscote for Refocus, a two-year project to engage 600 Kangaroo Island young people in a peer mentoring project. A discussion forum on binge drinking will provide accurate information to 35 peer mentors, who will then share this knowledge at 90 weekend music, dance and film events.
- $148,380 to the African Communities Council of South Australia in Devon Park for African youths of SA stop binge drinking, a two-year project aimed at reducing anti-social behaviour in African youths associated with alcohol intake. The project incorporates a number of activities of both an educational and diversionary nature.
- $250,000 to the Gindaja Treatment & Healing Centre in Yarrabah for Beat da Binge, a two-year project combining competitive sports with traditional and contemporary music and dance, and encouraging young people to take part. The project has been initiated by the Gindaja Treatment & Healing Centre, the Yarrabah Seahawks Sports Club and the Yarrabah community as a whole-of-community response to binge drinking among young people.
- $215,260 to the Logan City Police and Citizens Youth Club in Woodridge for Step Up!, a two-year project that aims to break the cycle of binge drinking by having at risk young people question and reassess the choices they have made about binge drinking – and to realise the

negative and harmful impact that drinking excessively has on them, their relationships and their lives in general.

- $213,900 to the Open Doors Youth Service in Fortitude Valley for On the Fringe, a two-year project aimed at preventing and reducing binge drinking in lesbian, gay, bisexual and transgender young people. The project includes drafting a manual that will include information on hosting drug and alcohol-free events, peer mentoring programs, and resources and referral information.
- $142,000 to Queensland Remote Aboriginal Media Aboriginal Corporation in Edge Hill for Our Body, Our Community, Our Choice, a 15-month project tackling binge drinking in remote Indigenous communities. Young people in these communities will be given the opportunity to develop their own radio programs discussing issues around alcohol and binge drinking and promoting positive lifestyle choices.
- $150,000 to the Brimbank City Council for the Summer Nights project. Summer Nights will offer drug, alcohol and smoke free events on weekend evenings over summer.
- $249,967 to St Josephs Youth Service in Tweed Heads for CoolHeads, a two-year street outreach program that will engage young people in the Tweed-Coolangatta area in public places at high risk times Friday and Saturday nights. The project will offer young people someone to talk to, and provide information, support and follow-up.
- $250,000 to the Byron Youth Service Inc for Project U-Turn, a two-year project that will bring together key stakeholders to develop and coordinate actions to reverse binge drinking trends among young people in Byron Bay.
- $25,000 to the Gilgandra Shire Council for Youth in Action, an 18-month project to help young people realise that there are alternative activities in the area to binge drinking.
- $149,727 to the New School of Arts Neighbourhood House in South Grafton for Clarence Valley Street Cruise, a two-year program to provide recreational alternatives to local youth. The program will be run by New School of Arts Neighbourhood House Inc.
- $249,500 to the South Coast Medical Service Aboriginal Corporation in Nowra for Booze and Bras Don't Mix, a two-year project to tackle the issues and problems of Indigenous binge drinking by giving young Aboriginal men the confidence to manage their drinking and relationships. The project will complement the Koori Chicks project, which addresses young Aboriginal women's binge drinking and covers the more remote areas of Wreck Bay, Jerrinja, East Nowra and Bomaderry.
- $175,000 to the Tumut Shire Council in Tumut for Be Somebody Sober, a two-year project to involve the youth of Tumut Shire in developing and implementing alternative activities to binge drinking.
- $250,000 to the Barkly Shire Council for a two-year, community-based project to tackle the problem of binge drinking among young people in the Northern Territory. The Barkly Shire Council will work with the Central Australian Youth Link Up Service to implement a youth binge drinking prevention and intervention program in the Alpurrurulam community on the NT-Queensland border, in partnership with community members and key stakeholders.

Third round funding 2012 ($9.98 million)	
Location of Project	**Project**
Alice Springs	**Gap Youth Centre Aboriginal Corporation (NT)** – $500,000 for the Off The Street project. The project will provide a safe alcohol-free

	entertainment venue for young people on Saturday nights in Alice Springs.
Balga, Kwinana, Mandurah, Bunbury, Northam, Katanning, Kellerberrin	**David Wirrpanda Foundation Inc. (WA)** – $500,000 for the Gwabba Yorga – Gabba Warra project. The program is aimed at Aboriginal and Torres Strait Islander girls 12-17 years engaged through netball competitions in Perth and a number of regional Western Australian towns.
Melbourne	**The Salvation Army Melbourne Project 614 (VIC)** – $495,000 for the Youth Street Teams project. The project will employ a multi-faceted early intervention approach to address high-risk activities and the harms associated with young people binge drinking in Melbourne's Central Business District.
Palmerston, Darwin	**Anglicare NT (NT)** – $300,000 for the Imagine, Create, Inspire project. The project is an innovative youth engagement and awareness project using peer education strategies and social media to encourage healthier behaviours in Darwin and Palmerston.
Normanton and Karumba	**Carpentaria Shire Council (QLD)** – $493,000 for the Carpentaria Shire Interagency Binge Drinking Working Group – Community Initiative to Combat Binge Drinking in Youth project. The project will strengthen agency and community networks in Normanton and Karumba to increase participation in social, cultural and sporting activities.
Victoria wide	**Incolink (VIC)** – $300,000 for the Drink Safe Mate project. The project will target 8,000 young workers in the Victorian building and construction industry through health education and capacity building approaches.
Cape York, Napranum, Mapoon, Aurukun, Doomadgee and Mornington Island, Kowanyama, Pormpuraaw, Hopevale, Lockhart River, Wujal, Wujal	**Queensland Remote Aboriginal Media Aboriginal Corporation (QLD)** – $255,610 for the In Our Own Words: young people working together to address binge drinking in remote Aboriginal communities in Queensland project. The project will being young Indigenous people from remote Cape York and Gulf of Carpentaria communities together to produce a series of radio programs for their local communities addressing the issues of binge drinking.
Cities of Marion and Onkaparinga	**Re-Engage Youth Services (SA)** – $497,445 for the Southern Collaborative Response to Binge Drinking project. The project will provide alcohol-free events and use social media to deliver health promotion messages in the communities of Marion and Onkaparinga.
Mitchell Shire LGA, Broadford, Wallan, Seymour	**Mitchell Community Health Service (VIC)** – $500,000 for the Whenever You're Likely To Drink project. The project aims to develop a coordinated community response to raise awareness of the health risks caused by binge drinking in the Hume communities of Broadford, Wallan and Seymour.
Melton, Taylors Hill	**Melton Shire Council (VIC)** – $287,282 for the Saturday Nights!! Live!! project. The program will provide a weekly range of alcohol-free events for young people in the Melton and Taylors Hill communities while using peer educators to raise awareness of the harms associated with binge drinking.
Kingston, Manuka, Canberra City, Braddon, Dickson, Belconnen and Woden	**The Youth Coalition of the ACT (ACT)** – $490,594 for the Champions ACT project. The project will increase awareness of alcohol related harm in young people who access entertainment precincts and licensed venues across Canberra.
Kalgoorlie - Boulder	**Eastern Goldfields YMCA Inc (WA)** – $424,879 for the Stronger Communities project. The project will provide a whole of community preventive approach to binge drinking in Kalgoorlie-Boulder.
Mareeba	**Mulungu Aboriginal Corporation Medical Centre (QLD)** – $280,908 for the Mareeba Young and Awesome: makin' music, makin' moves, makin' over and makin' out project. The project will provide a wide range of

	community activities and skills development for young Indigenous Australians in this rural Queensland community.
Wyndham	**Ngnowar Aerwah Aboriginal Corporation (WA)** – $300,000 for the Wyndham Youth Reconnect project. The project will target at-risk local youth by providing health education programs and alternative recreation activities.
Kelso, Bathurst and surrounding areas	**Bathurst Regional Council (NSW)** – $495,071 for the SMARTS – Smashed Arts project. The program will engage young people in the Bathurst region by providing health education messages and alternative entertainment opportunities.
St Marys, Penrith, Mount Druitt	**CuriousWorks (NSW)** – $95,439 for the Western Sydney Alcohol Awareness Video Initiative project. The project will provide education and skills training for young people in the Penrith area as they develop and produce videos promoting the harms of binge drinking for their peers.
Adelaide CBD (West End)	**Adelaide City Council (SA)** – $151,018 for the Green Team West End Youth project. The project will extend the voluntary street outreach program currently conducted during Schoolies Week at Victor Harbour to a Saturday night presence in Adelaide's CBD.
Victoria	**Multicultural Centre for Women's Health (VIC)** – $492,267 for the Healthy Lives, Health Futures project. The project takes a community development approach across Victoria to improve the capacity of young people from immigrant and refugee backgrounds to reduce their risk of alcohol-related harm.
Cloncurry, Mt Isa	**Cloncurry PCYC (QLD)** – $278,981 for the Chill Out project. The project will provide a local solution to binge drinking in Cloncurry and Mt Isa through health awareness sessions and sporting and recreation activities.
National	**Mushroom Marketing Pty Ltd (National)** – $500,000 for the Live Solution – Have A Better Time With Live Music project. The project will promote the enjoyment of a better live music experience by avoiding binge drinking.
Miranda and Hurstville	**Shire Wide Youth Services Inc (NSW)** – $500,000 for the Be A Smarty When You Party project. The project aims to reduce binge drinking through the provision of street outreach, alcohol free activities and events, and drop-in support services in the Sutherland and St George areas.
Sydney Metropolitan, Hunter Region and Far Northern NSW	**Youthsafe (NSW)** – $356,678 for the resilience building approach to the prevention and management of binge drinking among young workers project. The project will develop, deliver and evaluate a resilience-based binge drinking program of preventive resources and training to support apprentices and trainees in both work and community settings across Sydney, the Hunter and Far Northern NSW.
Palm Island, Barcaldine and Magnetic Island	**Australian Red Cross (QLD)** – $300,000 for the Binge on Life program. The program aims to provide alternative arts activities for youth on Palm Island and Central West communities to tackle the issue of binge drinking.
Grafton, South Grafton, Copmanhurst, Coutts Crossing, Yamba and Wooli	**Clarence Valley Council (NSW)** – $497,790 for the Eyes Wide project. The project will bring together young people, local service providers and health agencies in a model responsive to a dispersed population with limited youth services in Grafton and the regional towns of the Clarence Valley.
Leeton, Griffith, Narrandera	**Leeton Shire Council (NSW)** – $440,462 for the Bidgee Binge project. The project is an interactive, multi-faceted program aimed at reducing binge drinking among young people in the Leeton, Griffith and Narrandera areas.
Glenorchy (with	**Glenorchy City Council (TAS)** – $248,637 for the Interactive Online

national applicability)	project. The project will use social media to inform and education young people on the risks and consequences of bring drinking.

Appendix B – Interview Topic Guide

Ice Breaker Questions:

1. How did this group form?
2. How often does the group catch up?
3. What types of activities does this group like to do together?
   Probe for clarification when needed

Clarification Question:

4. What would you say the difference between moderate and risky drinking is?
   Probe for examples

Collective Intention Questions:

5. Run me through a general night out when everyone's drinking?
   a. Why a particular place?
6. How does the group know it has had a good night out?
7. Why does the group drink?
8. Why not some other activity?
9. How does belonging in your friendship group encourage people in the group to drink more or less alcohol?
   Probe for examples of group decision making

Köhler Motivational Gains Effect Questions:

10. Are people trying to compete with one another?
    a. Are people trying to see who can drink the most?
    Probe for examples (How? Where? Certain locations with certain people only?)
11. How does drinking change when the group changes?
    a. What about if the group changes size? Increases or decreases.
12. If the male female ratio changes does the level of drinking change? If it's an all-male group versus half males and half females?
13. How does the group perceive others if they are not drinking alcohol when everyone else is?
14. How does the group perceive others if someone has drunk alcohol to excess?
15. When the group goes out drinking is everyone usually expected to be drinking?
16. Do group members buy drinks for each other or have rounds?
    a. Is this always done or just for special events like someone's birthday?
    b. Does this increase the total amount you drink?
17. Are there opportunities not to drink?
18. How would other members of the group encourage (put pressure on) you to drink?
19. Does the group play drinking games?
    a. What kinds of drinking games are played?
    Probe for explanations about game and motives for playing

Questions regarding Social Marketing:

20. What kinds of negative problems or incidents have occurred in the group when drinking?

Probe for examples

21. Is it possible to have a good night out without drinking at all?
22. Do you think there are many alternatives to going out drinking? If so, what are they?
23. How does the group control your drinking levels?
24. What else bring similar benefits as drinking?

Probe for concrete examples

Appendix C – Transcription Sample

Interviewer: **Out of those groups, I'll just turn back to it, how did they form?**

Interviewee: Well, my close friends, it's probably be like seven or eight of us I would say. A few moved down to Brisbane with me from high school, a few people are from my first job in Brisbane and they all worked at the Uni Café together, and we probably see each other, go out together, probably about once a fortnight I would say, this year anyway. We're all pretty close, we keep in touch.

Interviewer: **What type of activities would you normally do?**

Interviewee: We do a fair range of things together. We'll go to the movies, we'll just sit at home, we'll jump in the pool, we will go out drinking. We just do whatever we'd normally do, like shopping or festivals together sometimes.

Interviewer: **And the next one?**

Interviewee: My boyfriend's friends. They're people I see, I guess, regularly often socially. Me and I boyfriend live together and we've been together for a fair few years, so I see them a fair bit. I'm probably not as close and comfortable with them as I am with my own friends, but ...

Interviewer: **You still hang out.**

Interviewee: Yes, we still hang out. We probably do more things, drinking together I would say. We might go for a barbeque but, I can certainly have a few beers or something like that, but I'm less likely to call them special friends. We might go to a movie, but my boyfriend will be there.

Interviewer: **So if your boyfriends wasn't there you wouldn't hang out with them?**

Interviewee: Yes, they're the people I would really socialise with otherwise.

Interviewer: **And then work friends is just?**

Interviewee: Work friends are obviously I work music stereo so I like to keep obviously a degree of professional there. I'm not going to get really drunk and make an arse of myself.

Appendix D – Informed Consent Sheet

Queensland University of Technolog Brisbane Australia	**PARTICIPATE IN RESEARCH** **Information for Prospective Participants**

The following research activity has been reviewed via QUT arrangements for the conduct of research involving human participation.
If you choose to participate, you will be provided with more detailed participant information, including who you can contact if you have any concerns.

Group Motivational Gains

Research Team Contacts

Principal Researcher: **Ryan McAndrew**, PhD Student, School of Advertising, Marketing & Public Relation (AMPR)
Email: ryan.mcandrew@student.qut.edu.au

Please contact the researcher team members to have any questions answered or if you require further information about the project.

What is the purpose of the research?

The purpose of this research is to investigate the role of groups in influencing motives for drinking. Specifically it will try to identify group motivations for drinking in young adults (18-30 year olds).

Are you looking for people like me?

The research team is looking for friendship groups between the age of 18 and 30.

What will you ask me to do?

Your participation will involve an interview where you will answer a series of questions. This will take approximately one hour.

Are there any risks for me in taking part?

The research team does not believe there are any risks beyond normal day-to-day living associated with your participation in this research.
It should be noted that if you do agree to participate, you can withdraw from participation at any time during the project without comment or penalty. Please note that non-identifiable data collected in this project may be used as comparative data in future journal publications.

Are there any benefits for me in taking part?

It is expected that this project will not benefit you directly. However, it may benefit the wider community and help to address excessive binge drinking. It will still be possible to withdraw even after the interview has been taped and it is also possible to participate without being audiotaped.

Will I be compensated for my time?

We would very much appreciate your participation in this research.
To recognise your contribution, should you choose to participate, the **research team is offering participants a Coles Myer gift card valued at $20.**

I am interested – what should I do next?

If you would like to participate in this study, please contact the research team for details of the next step.
You will be provided with further information to ensure that your decision and consent to participate is fully informed.

Thank You!	**QUT Ethics Approval Number:**	1100000975